The Oil and Gas Journal

PRODUCING REFINING MARKETING

VOL. 24. NO. 16. TULSA, OKLAHOMA, SEPTEMBER 10, 1925

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Crude Output Increases 21,241 Bbls.

Highest daily average estimated production this year, week ended May 30, 2,347,984 bbls. Lowest January 3, 1,911,730 bbls.

Oklahoma, North Texas and Gulf Coast Responsible. However, Greater Gains Had Been Expected

By Andrew M. Rowley

Highest daily average estimated light oil production this year, week ended January 17, 1,525,220 bbls. Lowest July 18, 1,374,173 bbls.

Substantial increases in crude oil production from the deep sand wells in the Garber Field in Oklahoma; a new high record of output from the Reagan Field in North Texas, due to drilling large producers in the proven area; with a good gain from the Gulf Coast, coming chiefly from worked over wells in the Hull, Orange and South Liberty Pools, resulted in an increase averaging 21,241 barrels daily for the entire country during the past week, with the output of light oil showing a gain of 21,766 barrels.

There are about 45 wells drilling to the deep sand in the Garber Field and increases in production from that area are to be expected, as has been predicted often. However, the increase during the current week probably will not be as great as that of last week and the total yield of the field, it is believed, will not be as great as was expected a month or two ago. The increase in the Gulf Coast about offset losses in that area of the past three weeks, and the North Texas area will not likely show future increases of the size of the one last week. California registered a loss of 1,000 barrels a day.

Taken as a whole, the crude petroleum situation is really in better shape than it was felt two or three months ago it would be. As was stated at that time, substantial increases in production should be expected the latter part of the summer and during the early fall, due chiefly to the development in Oklahoma. Consequently, the increases now being experienced were anticipated and are not as large as it was thought they might be.

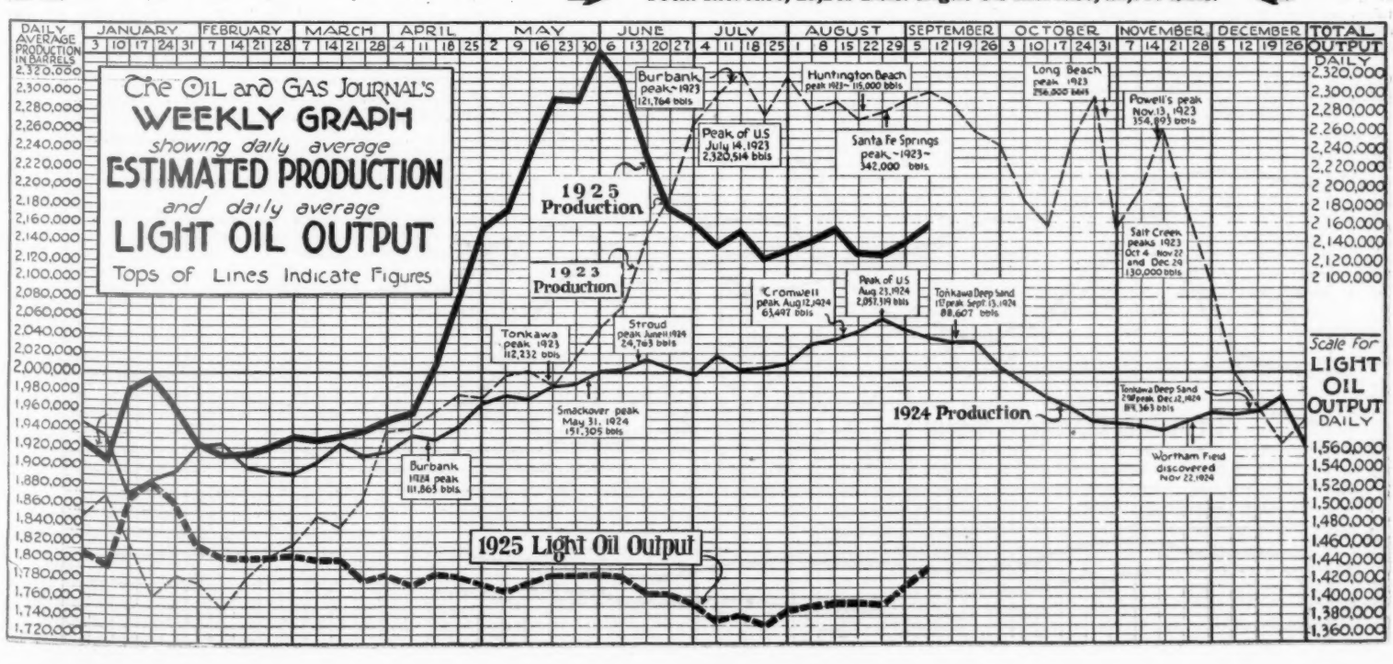
Hot weather throughout the country resulted in continued big sales of gasoline, and the refined oil market was more steady early this week. Mid-Continent refiners decreased their runs to stills about 20,000 barrels a day the first of this month, and while this represents only about 5 per cent of the total throughput, it will aid the situation as it affects gasoline.

California operators will not be surprised if crude oil prices are reduced in that section. The gasoline market there is quite unsettled and crude prices may be affected if the situation continues for any length of time. Operators in other sections of the country feel production of crude petroleum is still too high and that further reductions in prices are inevitable when consumption begins to fall off.

Estimated daily average production of light and heavy gravity crude oil in the United States for the week ended September 5, and a comparison with the previous week follows:

	Sept. 5		Aug 29	
	Light	Heavy	Light	Heavy
Oklahoma—				
Tonkawa	53 230		54,970	
Burbank	53,630		53,305	
Other Osage Fields	32,670		32,730	
Cushing and Shamrock	22,565		22,545	
Bristow and Eastern Bristow	31,355		31,705	
Cromwell	28,945		28,645	
Papoose	15,145		15,230	
Garber	34,560		17,565	
Braman-Blackwell	24,145		23,740	
Davenport	13,170		13,110	
Northern Miscellaneous	105,505		105,380	
Southern Fields	61,240		61,205	
Total Oklahoma	476,210		460,130	
North Louisiana	48,190		49,014	
Arkansas—				
El Dorado and Calion	8,805		8,765	
Smackover Light	25,810		26,220	
Smackover Heavy		186,085		190,205
Stephens and Nevada	3,255		3,245	
Total Arkansas	37,870	186,085	38,230	190,205
North Central Texas	174,633		168,853	
Powell	42 500		43,500	
Mexia, Currie, Richland, etc.	22,440		22,060	
Wortham	23,900		23,200	
Kansas	111,860		111,985	
Total Mid-Continent Area	937,663	186,085	916,972	190,205
Gulf Coast		103 635		96,752
Southwest Texas		45,310		47,598
Eastern	108,200		107,690	
Rocky Mountain Area	109,150		108,585	
California—				
Santa Fe Springs	53,000		53,000	
Long Beach	100,000		101,000	
Huntington Beach	43,500		43,000	
Torrance		35,000		34,500
Dominguez	29,000		29,000	
Rosecrans	26,000		25,500	
Inglewood	10 000	97.500	10 000	98 000
Remainder of State	17,000	261,000	17,000	262,000
Total California	278,500	393,500	278,500	394,500
Total United States	1,433,513	728,530	1,411,747	729,055
Grand Total	2,162,043		2,140,802	

Total Increase, 21,241 Bbls. Light Oil Increase, 21,766 Bbls.


The OIL and GAS JOURNAL'S
WEEKLY GRAPH
showing daily average
ESTIMATED PRODUCTION
and daily average
LIGHT OIL OUTPUT
Tops of Lines Indicate Figures
DAILY AVERAGE PRODUCTION IN BARRELS
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER
TOTAL OUTPUT DAILY
1925 Production
1923 Production
1924 Production
1925 Light Oil Output
Burbank peak-1923 121,764 bbls
Peak of U.S. July 14, 1923 2,320,514 bbls
Huntington Beach peak 1923-115,000 bbls
Santa Fe Springs peak,-1923-342,000 bbls
Long Beach peak 1923 256,000 bbls
Powell's peak Nov. 13, 1923 354,893 bbls
Salt Creek peaks 1923 Oct 4 Nov 22 and Dec 29 130,000 bbls
Cromwell peak Aug 12, 1924 65,497 bbls
Peak of U.S. Aug 23, 1924 2,057,519 bbls
Tonkawa Deep Sand 1st peak Sept 13, 1924 88,607 bbls
Tonkawa peak 1923 112,232 bbls
Stroud peak June 1924 24,763 bbls
Smackover peak May 31, 1924 151,305 bbls
Burbank 1924 peak 111,865 bbls
Tonkawa Deep Sand 2nd peak Dec 12, 1924 89,363 bbls
Wortham Field discovered Nov 22, 1924
Scale for LIGHT OIL OUTPUT DAILY

Refined Market Shows Better Tone

Slight Tendency Toward Firmness in Oklahoma Gasoline. Fuel Oil Prices Continue to Climb. Kerosene Scarce. Naturals Tight

By Neil Williams

With gasoline prices fairly steady after a two months' period of weakness and rapid declines, the tendency of fuel oil already upward and kerosenes continuing stronger and tighter, the Oklahoma (Group 3) refined market apparently faced another crisis Tuesday.

Although the gasoline situation still might be considered fundamentally weak with prices on the U. S. Motor grade a quarter of a cent lower than a week ago, nevertheless a general better tone prevailed. Toward the middle of the week sellers began to offer greater resistance to bearish elements and by the last of the week they were successful in checking the decline, at least temporarily.

While another general Mid-Continent crude oil reduction probably would cause another downward reaction in refined prices, many market students now are beginning to doubt the likelihood of the cut, at least as much of a slash as some have been expecting.

Even if Mid-Continent crude is reduced again in the near future, many students believe the refined market already has adjusted itself to this through expectancy and will not suffer materially. Nearly all seem agreed that regardless of a crude reduction the bottom of gasoline prices has been reached or is near. However, there are a few who hold the opinion that Oklahoma refiners may be forced to sell U. S. Motor as low as 7 cents or at least 7½ cents in the near future.

May Be Deciding Factor

The ability of refiners to hold out for present market prices for a few more days perhaps will be the biggest deciding factor in the trend of the market for the next month or months. It is known that several large jobbers are only waiting the time when they feel that the market has struck the bottom in order to refill their depleted storage. If refiners can hold present prices, these buyers, perhaps, will be led to feel that the time is ripe to place their orders.

If a general Mid-Continent crude reduction materializes soon, the same result may be accomplished as under present conditions gasoline prices following such action in all probability would be taken as the bottom. But, whether the result of the ability of refiners to maintain prices a few days longer or the culmination of a general crude cut, or both, market observers are of the opinion that an era of buying will ensue.

Indicative of the present gasoline situation is the fact that some good buyers are finding it more and more difficult to fill their needs freely at present low market quotations and have been forced to higher prices. One large buyer is reported to be in the Oklahoma market for a trainload of U. S. Motor gasoline at 8¾ cents, one-eighth cent above what others report making purchases. This would indicate that 8¼-cent gasoline is not as free as it has been.

In this connection is the fact that this trainload of gasoline is for New York delivery, an especially good omen for better Oklahoma market conditions in view of reports that New York and other Atlantic Seaboard States are flooded with cheap California gasoline. Judging from this, the California product may not be as much of a competitor of the Mid-Continent gasoline as reported.

Resistance to Recession

Resistance of refiners the past week to bearish factors can be attributed in a large way to two causes. In the first place, crude runs to stills have been reduced, not as much as had been expected, but yet enough that the slight decrease in production of refined products is being felt. The Oil and Gas Journal's monthly review of refinery operations showed that Mid-Continent refiners ran 19,092 bbls. less crude September 1 than they did on August 1 and 32,670 bbls. less than they did July 1. Although comparatively little, this reduction is bound to have some effect on the gasoline situation.

The other factor which has helped refiners the past week has been the extremely favorable motoring weather the past few weeks with its resultant heavy demands for gasoline. Although movements have been in small lots, buying has been unusually active the past few weeks and a large amount of gasoline has been shipped.

Because of this heavy demand for gasoline, many refiners have been placed in an excellent position. Surplus products have been disposed of, many tanks are empty and production has been reduced. The increased orders and fairly heavy demand for gasoline as a result has forced many of the refiners on the spot market themselves to fill their contracts.

Considering all these factors, Oklahoma refiners are in a better situation than they have been for several months, which accounts in a large measure for the better tone which prevails. However, as has been mentioned, the buying only in small lots, to fill day by day consumption demands, while market observers are of the opinion that it will take several large orders by jobbers filling empty storage before the market can receive enough support to cause material advances in prices. And, these orders will not come until the time when the buyers feel that bottom has been struck.

Trend to Stabilization

On the other hand, tank wagon price reductions continued the past week indicating that gasoline still is soft in other parts of the country. However, the changes were fewer and a tendency for markets to become more stabilized was in evidence. Nevertheless, the general weakness in other sections of the country will have to be removed before the Group 3 gasoline prices can be absolutely safe and sound, market critics maintain.

Another factor now will have to be taken into consideration by Group 3 refiners, according to market observers. That is the fact that the peak of consumption has passed and from now on the demand for gasoline will be on the wane. The extent to which stocks have been reduced the past month will have an important bearing on prices as the market enters the late fall and winter season. According to economic laws stocks should be lower now than at any time of the year with the heavy consumption period just past. If stocks have not been decreased to a normal amount, refiners will be burdened considerably as they enter the stock accumulation period.

(Continued on Page 150)

REFINED MARKET BAROMETER

General weakness still prevailed in gasoline markets of the country the past week, although in the Mid-Continent a better tone with a slight show of strength was apparent after two months of declining prices. Heavy consumption of gasoline in all sections showed some effect in the Mid-Continent but was not sufficient to offset bitter sales competition prices in other areas. Kerosene was firm in nearly every part of the country, especially in the Mid-Continent, where the product was extremely scarce. Fuel oils and gas oil were steady to strong with rising prices generally as a result of the coal strike. Natural gasolines were in good demand with unyielding quotations. Lubricants were firm although movements not particularly active. Wax was unchanged. Distillates quiet but firm waiting winter demand.

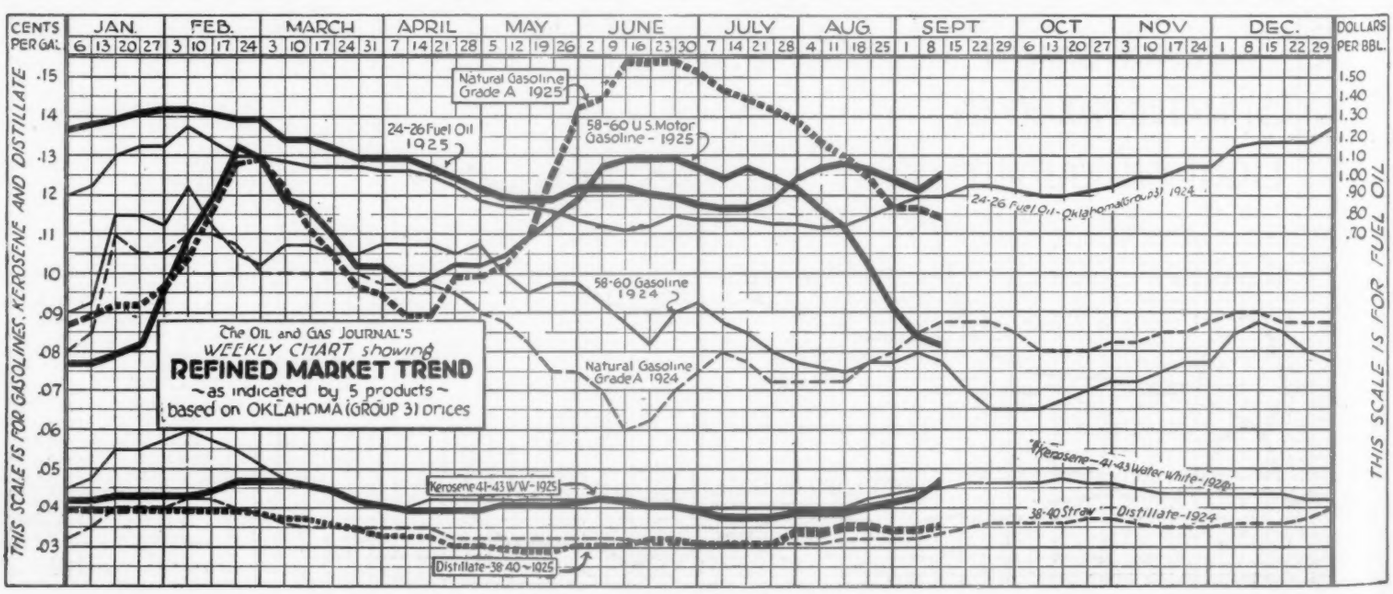
Mid-Continent—A better tone was evident the past week in Mid-Continent gasoline markets, particularly Oklahoma, where prices showed signs of becoming steady and stronger. Fuel oil and gas oil continued upward with demand excellent. Kerosene extremely scarce with rising quotations. Natural gasolines fairly steady generally with product tight in Oklahoma. Distillates unchanged but firm. Lubricants and wax quiet.

Atlantic Seaboard—General weakness continues in gasoline situation of Atlantic Seaboard. Fuel oil steady but situation menaced by California situation. Kerosene and lubricants firm. Petrolatum dull.

Pennsylvania—Cutting of refined prices continues in Pennsylvania with gasoline situation far from pleasing. Neutrals and cylinder stocks depressed. Kerosene and wax alone in good position.

Chicago—Gasoline situation in Chicago district continues weak despite high consumption demand. Kerosene strong with offerings few. Demand for fuel oil light but prices are higher.

California—The growing weakness of California refined markets was reflected the past week in reductions of both refinery and tank wagon gasoline prices. Fuel oil continues weaker. Natural gasolines off. Kerosene and lubricants alone fairly steady. Export gasoline lower.


CENTS PER GAL.
JAN. FEB. MARCH APRIL MAY JUNE JULY AUG SEPT OCT NOV DEC.
DOLLARS PER BBL.
THIS SCALE IS FOR GASOLINES, KEROSENE AND DISTILLATE
THIS SCALE IS FOR FUEL OIL
Natural Gasoline Grade A 1925
24-26 Fuel Oil 1925
58-60 U.S. Motor Gasoline - 1925
24-26 Fuel Oil - Oklahoma Group 3 1924
58-60 Gasoline 1924
Natural Gasoline Grade A 1924
Kerosene 41-43 W.W. - 1925
Kerosene - 41-43 Water White - 1924
38-40 Straw Distillate - 1924
Distillate 38-40 - 1925
The Oil and Gas Journal's
WEEKLY CHART showing
REFINED MARKET TREND
~as indicated by 5 products~
based on OKLAHOMA (GROUP 3) prices

California's Attention on Maricopa

Substantial Increase There May Mean Cut in Crude and Refined and Retarding Recovery of Industry on the Coast

By L. P. Stockman

LOS ANGELES, Cal., Sept. 5.—A general survey of conditions indicates California is just passing through another little production peak, mild, of course when compared to that reached during 1923 but, nevertheless, high in proportion to the State's normal output, taking into consideration the new fields added during the past few months. It looks as though the apex of the present production curve has been reached but, due to rapidly changing conditions, it would be hazardous to venture an opinion on conditions six months hence. One things is certain, there will not be any very fast drop in State production. Inglewood is still the fly in the ointment, but should fall off shortly. Due to the completion of several good wells during the past few weeks, field production has been hovering around 107,000 bbls. a day but will probably not ever again touch the highest daily output registered of 116,000 bbls. unless a deeper sand is developed. In consideration of future conditions, we can hold that Inglewood has already registered its maximum output and the tendency is now downward.

Rosecrans should show at least a small increase during the next 60 days, adding perhaps 10,000 bbls. a day to its present output of 23,000 bbls. This district has failed to live up to expectations and there is no reason to believe it will blossom out over night. It should be good for around 35,000 bbls. a day before the close of November. It is problematical just how long this figure will be maintained, as wells in this area have a decided tendency to fall off miserably following completion. Daily production at Long Beach has been dropping for the past few months at about the rate of 1,000 bbls. a week. There are about 25 new wells going down out on American Avenue in the northwestern part of the field, and their completion within the next 60 to 90 days may temporarily arrest the decline. The field will, however, continue its downward trend. Santa Fe Springs, Hutington Beach and Torrance have about reached bottom and should continue producing at approximately their present rate for some time, as the installation of improved pumping equipment should offset the otherwise normal decline.

Dominguez Deferred

Dominguez is being reserved for the future by a commendable agreement between operators to refrain from overdrilling in the present zone and hold off deep tests indefinitely. So far this gentlemen's agreement has been admirably and zealously adhered to. It is hoped that no one violates the agreement as the advantages accruing are mutually beneficial, not only to operators in this particular area but to the industry in general.

There has been quite a good deal of excitement up around Maricopa during the past few weeks due principally to the completion of a deep sand well out in the flats by the Obispo Oil Co. Actual completion data is not available on this hole, as it came in barefooted and prematurely. For this reason it is not known just where the production is coming form, but it is thought the oil is flowing from lenses of heavily saturated oil sands in the brown shale. If this is correct the area will be rather spotted instead of having a regular well defined lower horizon. This will also keep down production by preventing general drilling after the first era of development has passed. A number of geologists are of the opinion the area will be lenticular and production irregular, but until this is actually proved to be the case the area will continue to be threatening and warrant considerable new work. The writer is of the opinion that the potentialities of the new deep underestimated, but will abide by geological advice pending further field development. The Pacific Oil Co. has property on four sides of the Obispo's new well and stands to get in the play at one point at least. Work has been started on new wells and deepening jobs by about ten operators, and it is quite possible something definite will be known of the possibilities of the Obispo's find within 60 days. No great amount of new work is being done in any of the other fields in the San Joaquin Valley and conditions will probably remain in status quo for some time, although considerable prospecting is being done in wildcat territory.

Light Oil Off

In summing up the production situation one cannot help but be impressed by the still heavy production and not any too bright outlook. True, the light oil production has fallen off, but it has been replaced by a less desirable low gravity crude. The fact remains, however, that this new output must be taken care of and, while it will be a source of cracking stock within the next five years, it has temporarily caused a glut in the fuel market and resulted in another storage crisis. To meet this emergency, several of the marketing companies have shut in production and started the construction of various new tankage facilities. The Standard is building a new 3,000,000-bbl. reservoir at El Segundo in southern California and is contemplating one of similar proportions in northern California, to be located between Antioch and Pittsburg. It has only been a matter of a few months since the Standard completed a 2,800,000-bbl. reservoir at the former point, but this has apparently proved inadequate. For the past several weeks the company has been at work relining its old reservoir at Kern River, installing new tops and otherwise preparing them for future use. The Standard and Shell have for some time been tanking southern California oil to San Francisco, where it is topped and the residuum pumped back through the San Joaquin Valley as far south as Coalinga and Kern River, where they have several empty reservoirs built eight or ten years ago. While mentioning the construction of new storage facilities, it is interesting to note predictions were freely made a year or so ago that a considerable amount of tankage constructed during the production crisis of 1923 would never be used. Not only has this empty storage been filled but additions have already been uitilized.

Storage of Residuum

The Pan-American is at present busily at work constructing several new steel tanks and another reservoir at Watson, near Los Angeles Harbor, for future use.

The reservoir, which will be used for the storage of residuum, will have a capacity of approximately 3,000,000 bbls. and cost in the neighborhood of $600,000, including cost of acreage. When this new reservoir is completed the Pan-American will have storage facilities for about 10,000,000 bbls. at its Watson tank farm, which is also the location of its California refinery. The company should begin running oil through its new pipe line from the Midway-Sunset and Elk Hills Fields, in the San Joaquin Valley, to Watson, a distance of about 125 miles, about the middle of September. It has been thoroughly tested with water and the first 50 miles received their baptism of oil last week when the company pumped 30,000 bbls. of crude from Elk Hills and stored it along the line. The initial intake will be around 15,000 bbls. a day, the first oil being received at Watson about two and a half days later. The Pan-American got off to an auspicious start in its expansion program in California some time ago and its equipment and personnel is of the highest quality.

The refinery at Watson, which has a crude capacity of around 35,000 bbls. a day, embodies all the latest improvements in plant construction and is considered one of the best in the State. It is the acme of cleanliness and the premises are improved with ornamental lights and paved streets. Additions are still being made from time to time as conditions warrant, and it will probably in time assume major proportions. The company's line, iscorporated as the Los Angeles Midway Pipe Line Co. and operated in conjunction with the Petroleum Securities, a Doheny holding company, is also in good shape. Instead of using residuum as fuel under the burners in the pump and booster stations, as is generally customary, Diesel oil will be used. Tests have so far shown this to be far more economical than straight steam boilers.

Returning to the survey of new storage facilities, we find the Associated, Pacific, Shell and General Petroleum engaged in new work in addition to the companies already mentioned. The Pacific is building a few steel tanks at various points and is checking up the possibility of salvaging its reservoir at Kern River, which was the scene of a disastrous fire a few weeks ago. The Associated is erecting five steel tanks in Southern California and several more at Ventura. The Shell has ample storage for the present, but will probably start reconstruction of the reservoir which caught fire at Coalinga three weeks ago, if this is possible. Several steel tanks have been projected for Ventura to take care of the Shell's production in that area, but actual construction has not yet gotten under way. The General Petroleum has just about finished its new reservoir at Athens and will probably start running in oil some time during 30 days.

Price Structure

Recent price cuts in crude oil in the Mid-Continent and Texas fields, together with several slashes in gasoline and refined oils, have rendered conditions in California rather uncertain. The price structure here has been quite unsteady for the past several months and it would not be at all surprising if the cuts made east of the Rockies were reflected on the Pacific Coast a little later in the year. The only cut made in California of late has been a reduction of 30 cents per barrel in fuel oil effective August 29. This brings the retail price of fuel oil and residuum in Los Angeles to $1.20 per barrel, compared with $1.25 at San Francisco. Other sections served from these points will also reflect the cut. This reduction, made because of a heavy production of low gravity oil and keen competition in the fuel market, applies only to commercial feul and not crude oil. California shipments of gasoline to the Atlantic seaboard have of course been directly responsible for recent price adjustments, and it is problematical what the future holds for those who have been dumping this motor fuel on the East Coast. A reduction in shipments will surely work a hardship on some, as this surplus must either be stored or sacrificed at low prices. September is a good motoring month in Washington, Oregon and California and, while the seasonal change is not so great on the Pacific Coast, winter consumption is naturally considerably less. Just what action will be taken by marketing companies during the winter months

(Continued on Page 148)

CRUDE AND REFINED OIL RECEIPTS AT ATLANTIC PORTS SHOW DECREASE

By N. O. Fanning

NEW YORK, Sept. 5.—A sharp contraction in receipts of crude and refined oil by water at Atlantic Coast ports was recorded during August as compared with July and June of 1925 and August, 1924. This is believed to reflect a sudden reduction in refining operations on the Atlantic Coast as well as a surplus of both crude and refined oil on hand at refineries at the close of July due to heavy arrivals in July and June.

Receipts during August are estimated at 13,552,000 bbls., a daily average of 435,000 bbls., compared with 17,404,000 bbls., or a daily average of 561,000 bbls. in July, and 16,923,000 bbls., or 564,000 bbls. daily in June. August, 1924, receipts totaled 16,181,000 bbls., a daily average of 521,000 bbls.

Daily average receipts in August, 1925, show a decline of 126,000 bbls. compared with the daily average for the preceding month, and a decrease of 86,000 bbls. compared with August, 1924.

Estimated daily average receipts from the various sources in August, 1925, July, 1925, and August, 1924, are as follows (barrels):

	August 1925	July 1925	August 1924
Baton Rouge and New Orleans ..	85,000	82,000	104,000
Port Arthur, Sabine and Beaumont	98,000	154,000	118,000
Texas City, Houston, Galveston .	108,000	155,000	88,000
Gulf Coast ..	291,000	391,000	310,000
Pacific Coast	54,000	63,000	127,000
Imports	90,000	107,000	84,000
Total	435,000	561,000	521,000

Receipts from Gulf Coast ports during August averaged 291,000 bbls. daily, a drop of exactly 100,000 bbls. compared with July, which was a record month. Compared with August of last year, Gulf receipts show a decrease of 19,000 bbls. daily.

Receipts from the Pacific Coaast in August averaged 54,000 bbls., a decline of 9,000 compared with July and of 73,000 bbls. compared with August, 1924.

Imports from Mexico in August, 1925, averaged 78,000 bbls. daily, compared with 100,000 bbls. in July, a decline of 22,000. Compared with August, 1924, imports from Mexico show a gain of 4,000 bbls.

Imports from other sources (South America) in August averaged 12,000 bbls. daily, compared with 7,000 in July, 1925, and 10,000 in August, 1924.

Comparatively small receipts on the Atlantic Coast from California during August indicate that so far as the eastern market is concerned, California is less of a factor now than in August a year ago, when receipts averaged 127,000 bbls. daily, or almost 2.4 times those of August this year.

Increased Output of Refinable Crudes

Production Sept. 1 Was 75,876 Bbls. Greater Than on May 1. Inglewood Calif. Chief Cause

By James McIntyre

The total production of crude oil in the United States on September 1, 1925, shows little change as compared with the production on May 1. On September 1 it was 2,154 965 bbls., while on May 1 it was 2,156.782 bbls. a decline in September of 1,817 bbls. per day. However, a very great change is noted in the production of refinable crude, especially in the heavy refinable crudes.

The refinable light oil production (28 gravity upwards) on May 1 was 1,178,109 bbls., while on September 1 it had increased to 1,228 960 bbls., a gain of 50 851 bbls. In the heavy crude with a high gasoline content the production on May 1 was 228 500 bbls. and on September 1 198 350 bbls., a decline of 30,150 bbls. The tremendous flush production of the Inglewood Field in California—crude which is skimmed of over 12 per cent gasoline—was responsible for an increase of 79.175 bbls. in the production of heavy gravity oils of lower gasoline content. This class of oil on May 1 amounted to 222.500 bbls., while on September 1, it had increased to 277,675 bbls.

Smackover's Decline

In the class of oil not suitable for straight refining a decrease of 101.693 bbls. is noted. A drop in Smackover heavy oil from 291.600 bbls. on May 1 to 180 000 bbls. on September 1 makes plain why this class of crude shows a falling off.

Pronounced changes in the production of a number of important pools from May 1 to September 1, an interval of four months, have had some influence on the production of oil by gravity, increasing the production of five classifications and causing a decline in six classifications.

Garber on the Ascendancy

For example an increase of 35.664 bbls. a day is shown in the production of crude oil of 43 degrees gravity and above, caused by the increase of production in the Garber Field in Garfield County, Oklahoma, from 7,700 bbls. on May 1 to 32.000 bbls. on September 1, due to the partial development of the sands below 4.100 feet, and the increase in the production of the Davenport Pool in Lincoln County, Oklahoma, from 3.500 bbls. on May 1 to 13.274 bbls. on September 1. This pool produces 47 gravity crude, and its production on September 1 is not considered as its peak. It has been increasing its output steadily all summer. Most of the production is from the Prue sand around 3.400 feet. In the case of Garber, all estimates on what it may reach in peak production are merely wild guesses.

The presence of salt water in the deepest of the known sands in Garber has upset the calculations of oil men as to what Garber may do, but the field must not be discounted. Water appeared in Cushing, Powell, Mexia, Wortham and other big fields in the Mid-Continent in alarming quantity, yet they poured out hundreds of millions of barrels of oil between them and are yet in the major class of fields. Garber is still a dangerous factor in considering the crude price structure, and it will take some time to get a definite line on the field.

The fields producing crude of 41 to 42.9 degrees, of which there are 12 in the United States, showed a falling off in production from 138,850 bbls. on May 1, to 121,830 bbls. on September 1, a decline of 17,020 bbls., due in the main to the drop in the production of the Tonkawa Field in Kay and Noble Counties, in Oklahoma, from 67,460 bbls. to 54,600 bbls., and the decline in Wor-

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PRODUCTION OF CRUDE OIL BY GRAVITY IN THE UNITED STATES MAY 1 AND SEPT. 1, 1925

Light Oil	May 1	Sept 1
43° and above	59.980	95,644
41° to 42.9°	138.850	121,830
40° to 40.9°	35.102	64,958
38° to 39.9°	298.758	304.455
36° to 37.9°	285,899	285,356
34° to 35.9°	133.695	132,622
32° to 33.9°	128,325	132,480
30° to 31.9°	70.185	61,600
28° to 29.9°	27,315	30,015
Total	1,178,109	1,228,960
Heavy Oil of High Gasoline Content		
20° to 27.9°	228.500	198,350
Heavy Oil of Lower Gasoline Content		
20° to 27.9°	222.500	277,675
Heavy fuel oil, lub oils and lighter oils not suitable for the production of gasoline by straight refining processes	527.673	449,980
Total prod.	2,156,782	2,154,965
Increase in daily production of crude oil suitable for straight refining (gasoline crude)	75,876	
Decrease in daily production of crude oil not suitable for the production of gasoline by straight refining processes	77,693	

Production by Field and by Gravity	May 1	Sept. 1
43 degrees and above—		
Fields of New York, Pennsylvania, West Virginia and southeastern Ohio	45,200	45,900
Davenport, Okla.	3.500	13.274
Garber, Okla.	7,700	32,000
Hogback, N. Mex.	530	510
Rattlesnake, N. Mex.		460
Cat Creek, Mont.	3,050	3,500
Total	59,980	95,644
41 to 42.9 degrees—		
Billings, Okla.	395	400
Greybull, Torchlight, Wyo.	60	30
Lance Creek, Wyo.	1,770	620
Craig, Colo.	810	2,540
Tonkawa, Okla.	67,430	54,600
Seely-Westcott, Kans.	4,845	9,000
Thomas, Okla.	900	3,800
Paulhamus-Agard, Kans.	3,140	3,500
Potwin, Kans.	715	1,050
Wortham, Tex.	57,100	43,500
Currie, Tex.	1,410	1,400
Florence, Colo.	245	1,390
Total	138,850	121,830
40 to 40.9 degrees—		
Blackwell, Okla.	2,455	1,875
Stroud, Okla.	3,325	4,208
Cowley County, Kans.	15,250	19,500
Pixley-Teeter, Kans.	5,400	14,700
Richland, Tex.	5,400	3,160
Braman, Okla.	2,150	20,100
Palo Pinto Co., Tex.	122	605
Pioneer, Tex.	1,000	810
Total	35,102	64,958
38 to 39.9 degrees—		
Fort Collins, Colo.	830	1,390
Indiana fields	2,500	2,450
Illinois fields	21,600	21,500
Cushing-Shamrock, Okla.	21,950	21,800
Cromwell, Okla.	41,860	28,474
Papoose (Wetumka), Okla.	26,170	15,241
Wewoka, Okla.	12.466	10,634
Mervine-Ponca City, Okla.	1,375	1,400
Deaner-Lyons, Okemah, Yeager, Holdenville, Weleetka, Okla.	6,100	9,199
Rosecrans-Athens, Cal.	17,000	25.500
Fox-Bush, Kans.	2,630	2,250
Blankenship, Kans.	1,050	950
Leon-Weaver, Kans.	835	825
Russell Co., Kans.	1,500	5,700
Thrall-Burkett, Kans.	5,650	6.500
Virgil, Kans.	4,740	4,950
Sallyards, Kans.	1,709	2,200
Rice County, Kans.	80	115
Burkburnett, Tex.	14,800	14.200
Archer Co., Tex.	41,650	37.150
Electra, Tex.	17,300	17,300
K. M. A.-Iowa Park, Tex.	4,170	5,270
Corsicana (light) Tex.	450	442
Petrolia, Tex.	375	370
Wilbarger Co., Tex.	6,475	8,900
Caddo, Tex.	4,550	5,540
Clear Fork, Tex.	6,337	5.450
Gunsight, Tex.	64	40
Ranger-Eastland, Tex.	6,925	6,375
Callahan Co., Tex.	3.930	2,970
Reagan Co., Tex.	18,000	33,300
Jack County, Tex.	20	30
Pilot Butte, Wyo.	no runs	300
Rex Lake, Wyo.	no runs	
Sipe Springs, Tex.	207	180
Desdemona, Tex.	2,675	2.500
Artesia, N. M.	725	3,000
Total	298,758	304,455
36 to 37.9 degrees—		
Salt Creek, Wyo.	59.160	63,400
Burbank, Okla.	59.970	54.300
Powell, Tex.	52,600	44,300
Mexia, Tex.	18,500	17,500
Kentucky fields	15,000	15,100
Grass Creek, Wyo.	4,220	3,860
Osage, Wyo.	390	340
Rock River, Wyo.	3,380	2,770
Teapot Dome, Wyo.	1,780	1,650
Rising Star, Tex.	108	70
Big Muddy, Wyo.	3,320	3,350
Hubbard, Okla.	1,530	2,121
Cleveland, Keystone, Otoe, Ralston, Masham and Jennings (Pawnee County) Oklahoma	18.016	18,025
Yale, Quay, Ignalls and North Cushing, (Payne County,) Okla.	5.900	5.610
Lima and Central Ohio	14,000	13,800
Okmulgee and Muskogee fields, Okla.	21,000	20,700
Caddo, DeSoto and Red River, La.	6,350	17,500
Sluss and Smock, Kans.	675	930
Total	285,899	285.356
34 to 35.9 degrees—		
Bristow, Okla.	28,500	27,400
Osage County, Okla., outside of Burbank	34.200	32,500
Tulsa district, Okla.	9,950	10,100
Brock, Okla.	1,900	1,985
Duncan, Okla.	6,200	6,600
Peabody, Elbing, Robinson, Augusta, Wilson Dunkle, Douglass, Kans.	11,850	11,890
Harvey County, Kans.	120	62
Haynesville, La.	14,400	12,690
Homer, La.	6,790	6,400
Hambro, Okla.	560	1,100
Kentucky Fields	2.975	2.990
Breckenridge, Tex.	8,800	6,875
Shackelford County, Texas	2,550	3,300
Panhandle, Tex.	2,480	3,650
Coleman County, Tex.	70	310
Brown County, Tex.	1,270	2,750
Mule Creek, Wyo.	no runs	700
Byron, Wyo.	60	300
Elk Basin, Wyo.	940	910
Ferris, Wyo.	80	110
Total	133,695	132,622
32 to 33.9 degrees—		
Santa Fe Springs, Cal.	48,000	53,000
Hewitt, Okla.	15,700	14,800
Graham-Fox, Okla.	12,500	12,200
Walters, Comanche, Cement, Sayre, Okla.	3,300	3,210
Florence-Urschell, Covert-Sellers, El Dorado, Towanda, Nuttle-Koogler, Kans.	13,000	13,100
Bartlesville district Okla.	6,050	6,200
Eastern Bristow, Okla.	6,700	6,100
Glenn Pool and Kiefer, Okla.	9,000	8,900
El Dorado, Ark.	9,345	8,750
Kentucky fields	1,000	1,100
Lost Soldier, Wyo.	3,700	5,120
Total	128,325	132,480
30 to 31.9 degrees—		
Nowata and Chelsea district, Okla.	5,500	5,650
Dominguez, Calif.	46,000	29,000
Healdton, Okla.	15,150	15,000
Allen and Kilgore, Okla.	310	300
Mitchell County, Tex.		150
Sunburst, Mont.	3,225	11,500
Total	70,185	61,600
28 to 29.9 degrees—		
Eastern Kansas fields	12,900	13,450
Milroy, Okla.	440	430
Cotton Valley and Elm Grove, La.	9,100	12,000
Stephens, Ark.	2,000	1,775
Sholom Alechem, Okla.	1,910	1,450
Corsicana, heavy, Tex.	285	280
Hamilton Dome, Wyo.	680	630
Total	27,315	30,015
20 to 27.9 degrees, from which gasoline may be extracted by straight refinery process—		
Smackover, light, Ark.	30,500	27,000
Long Beach, Cal.	114,000	101,000
Huntington Beach, Cal.	42,000	43,000
Midway-Sunset, Cal.	84,000	80,000
Montebello, Cal.	28,000	18,500
Murphy-Coyote, Cal.	20,000	20,000
Elk Hills, Cal.	38,000	28,400
Torrance, Cal.	36,000	28,000
Inglewood, Cal.	3.500	75,000
Lost Hills-Belridge, Cal.	5,000	4,625
Ventura-Newhall	19.800	20,000
Richfield	10.000	10,000
Coalinga	14,700	15,000
Miscellaneous (Cal.)	5,600	5,500
Total	451.100	476,025
Heavy fuel oil, lub oils and lighter oils not suitable for straight refining processes—		
California	76,400	116,475
Smackover, heavy, Ark.	291,600	180,000
Bellevue, La.	4,000	2,975
Robberson and Loco, Okla.	4,780	4,450
Nevada, Ark	1,610	1,455
Gulf Coast and Southwest Texas	147,333	144,000
Mitchell County, Tex.	1,580	2,250
Wyoming, heavy	370	375
Total	527,673	449,980

Another Decrease in Refinery Runs

Mid-Continent Refiners Reduce Crude Throughput to Stills 19,692 Barrels Daily During Past Month. Low Gasoline Prices Responsible

By Neil Williams

Rapidly declining gasoline prices the past few months at last are casting their shadows over Mid-Continent refiners to such an extent that material reductions are being made in crude runs to stills This was revealed in The Oil and Gas Journal's monthly review of refinery operations which showed that total runs on September 1 were 19,692 bbls. under those of August 1.

Total runs the first day of this month amounted to 407,690 bbls. while the throughput on August 1 totaled 427,382 bbls. The figures are based on reports from all the 127 operating refineries in the Mid-Continent including the States of Oklahoma, Kansas, North Texas. North Louisiana and Arkansas.

The appreciable decrease in runs, while not as large as is needed at this time, will revive hopes of Mid-Continent refiners for better market conditions by indicating a reduction in the production of refined products. The excessive stocks of gasoline this summer and the continued increase in refinery runs and consequent overproduction of refined products have caused a situation extremely burdensome to refiners.

Although cutting of runs began during the latter part of July, the total reduction August 1, compared with runs of July 1 was comparatively slight and offered the refiners virtually no help in their efforts to keep gasoline production anywhere near down to a level with consumption. The large crude runs, coupled with an increased percentage of gasoline yield, still forced excessive amounts of distress products on the market with the result that prices dropped rapidly and at this writing still are declining.

Reduction Since July 1

However, the decrease August 1 and that of September 1 makes a total reduction in runs since July 1 of 32,760 bbls. daily. This drop, although only approximately 8 per cent of the runs of September 1, indicates that refiners are taking a step in the right direction. But, under present conditions, with the market flooded with distress gasoline, the reduction should have been at least 25 or 30 per cent, according to many observers.

As it now stands, daily crude runs still are 24,440 bbls. greater than on April 1, when the last period of increasing began. And in this connection, it might be mentioned that since April 1 daily crude runs have soared higher than at any other time in history, reaching a peak July 1 when the total throughput amounted to 440,350 bbls. As these new high marks have been made the proportionate decrease in runs at this time will have to be considerably greater than in the past in order to bring production of refined products down to a normal basis.

Although the decrease in runs may not have been as much as needed by refiners, it perhaps was responsible to a considerable extent for the recent crude price reductions. The turning back of of 32,760 bbls. of crude daily and the possible further reduction of crude runs is bound to have some effect on the situation.

According to a comparison of the refinery runs with The Oil and Gas Journal's crude oil production figures, Mid-Continent refiners used only 36.8 per cent of the daily crude production of the same area which amounted to 1,107,177 bbls. On August 1, the runs were 39.3 per cent of the production. By these figures it can be seen that refiners on September 1 used 2.5 per cent less of the crude production than they did on August 1. This decrease is all the more conspicuous when it is known that crude oil production was less on September 1 than on August 1.

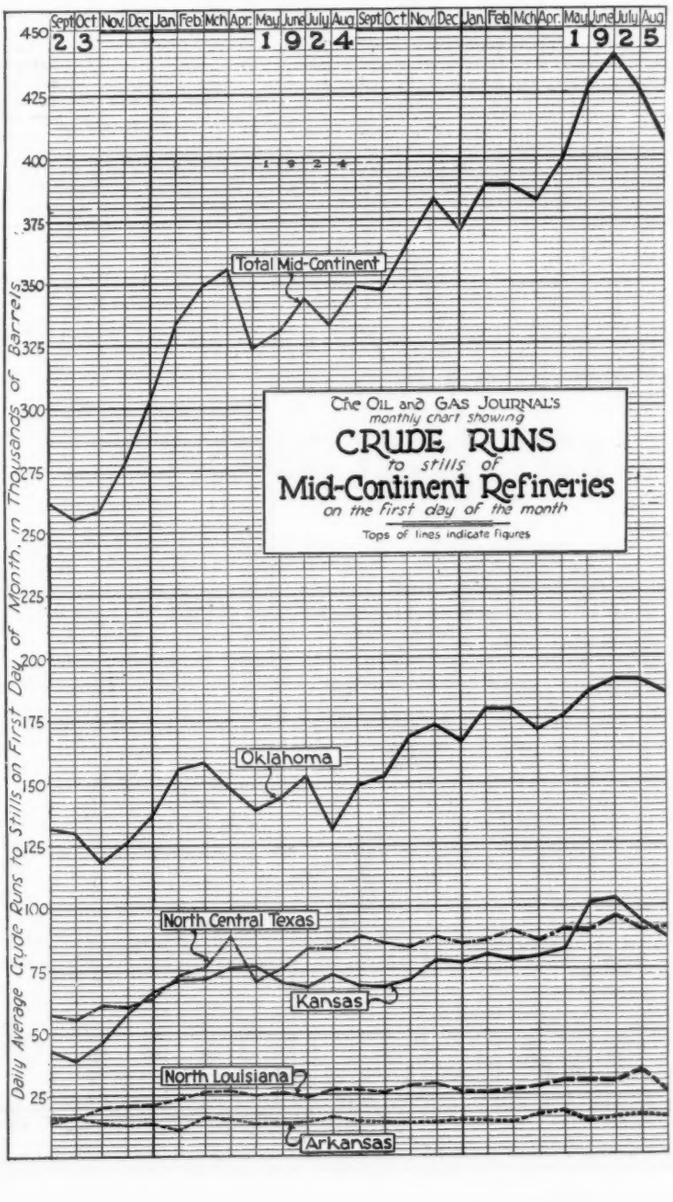
Decrease Fairly General

The decrease in refinery runs was fairly general throughout the Mid-Continent except in North Texas, where runs were increased 1,183 bbls. North Louisiana refineries led in the decrease with a reduction of 8,500 bbls; Kansas was second with a cut of 6,900 bbls; Oklahoma was third reducing runs 4,725 bbls., while Arkansas was fourth with a change of only 750 bbls.

The increase in North Texas was due chiefly to the reopening at Wichita Falls and Electra of the two plants formerly operated by the Griswold Oil Corp., and by the addition of two more refineries to the list. The two new plants on the list not reported in previous reviews of refinery operations are The West Texas Refining & Development Co., at Colorado and the Peerless Refining Co. at Wortham. These two plants added 1,350 bbls. of crude daily to Texas figures.

The two Griswold plants were reopened the latter part of August under separate managements. The plant at Electra was taken over by the Dale Oil & Refining Co., J. E. Dale, Jack B. Dale, and C. H. Melton were named as incorporators. The other Griswold plant at Wichita Falls is being operated now as the Wilson Brothers Refining Co. These plants added approximately 1,700 bbls. daily in runs.

While these plants boosted North Texas runs September 1, the throughput will be further increased September 10 when the Amarillo Refining Co. at Amarillo increases its runs from 2,300 bbls., as of the September 1 report, to 5,000 bbls. The Amarillo plant has been undergoing a number of improvements which will enlarge its capacity. Among the extensions is a pipe line to the Amarillo oil field, the first to be laid to that pool. This addition of 2,700 bbls. daily runs, unless offset by cuts in other plants, will lessen the amount of decrease reported in the accompanying tables for September.



In addition to the changes mentioned, 10 North Texas refineries reduced runs a total of 2,367 bbls. September 1, while 10 other refineries increased runs only 1,700 bbls. The DeLeon Refining & Pipe Line Co. plant at DeLeon, which was reported operating August 1, was shut down September 1, cutting off 700 bbls. of crude runs.

In connection with the adding of the West Texas & Development Co. plant at Colorado to the monthly report of The Oil and Gas Journal, it might be mentioned that the Anderson-Prichard Oil Corp. of Oklahoma City, the owner and operator, sold a half interest during August to the California Co. of California. However, the Oklahoma City firm will continue to operate the plant.

Oklahoma Slackening

Oklahoma's reduction in runs was due more to a general tendency to slacken operations rather than to individual factors. However, the Producers & Refiners Corp. plant at Blackwell and the Nyanza Refining Co. plant at Wilson, shut down during the latter part of August. These two plants ran 2,300 bbls. of crude August 1. Eleven Oklahoma plants decreased runs 4,250 bbls. September 1 while four plants increased runs 1,850 bbls. Two other plants, those of the Daisy Bell Petroleum Co. at Wilson and the Lawton Refining Co. at Lawton, which were reported shut down August 1, were running September 1.

The Globe Oil & Refining Co. at Blackwell is completing two new stills which will increase the capacity of the plant from 5,000 to 6,000 bbls. daily. The Producers & Refiners Corp. mentioned previously as shut down, is making general repairs and improvements at the Blackwell plant. The plant will not be in operation for about 30 days. The Cushing Refining & Gasoline Co. has completed dismantling the old Bison Refining Co. plant at Quay, which it bought at a tax sale. The material is being moved to the Cushing company's plants at Blackwell and Cushing.

Standard Cut in Kansas

Most of the large reduction in Kansas runs can be attributed to one plant, that of the Standard Oil Co. of Kansas. This plant reduced its runs September 1 from 9,300 to 4,850 bbls. Although cuts were made by six other plants, they were comparatively slight, Kansas refinery operations being little changed during August.

However, the decrease in Kansas runs September 1 may be cut down later in the month when the new refinery at Russell is opened, being supplied with crude by the Derby Oil & Refining Co. This plant is expected to start up within two weeks. It will have a capacity of between 1,500 and 2,000 bbls. daily.

Although several North Louisiana plants showed marked reductions in crude runs, the shut down of the Great Southern Refining Co. plant at Ardis featured North Louisiana operations. This plant ran 1,000 bbls. on August 1. Officials of the company declared the plant would remain closed until better market conditions prevail.

Arkansas refining operations were virtually unchanged during the past month, except for the shut down of the McMillan, Fehlman and Oliver plant at El Dorado, cutting off 200 bbls. of crude runs. Slight reductions were made in three other plants while two plants showed small increases.

According to The Oil and Gas Journal's report, 127 refineries were operat-

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Big Area in Wyoming Untested for Oil

Basin Comprising 200 Square Miles Practically Surrounded by Oil Fields. Geology Hard to Determine

By Frank B. Taylor

CASPER, Wyo., Sept. 5.—Oil development in the Rockies during the past 10 years shows some similarity to the days of the early gold rush to California. In those days the miners trecked westward to the Pacific and found gold, then they came back and explored the Rockies to be rewarded with further discoveries that discounted the California diggings. In much the same way, the early oil prospectors searched and found petroleum in California and then turned their attention to Wyoming resulting in the development of large petroleum deposits.

After the main fields that were prominent on the surface in Wyoming had been taken up, the oil operators turned their attention to Montana, Utah and Colorado. At present Colorado operators have had only fair success for only two fields have been proven there after much expense. Utah is generally classed as wholly out of the running and Montana looks good to many as the newer development in Sunburst Field seems to point out many other areas that may be found productive where the surface geology is covered up to a greater or less extent.

Now the oil men are coming back to Wyoming and thoughtfully looking over the areas that are covered up so as to hide the Cretaceous strata and any movement of the strata or structural indication. Wyoming was the premier State in the oil development of the fields that were prominent on the surface and many consider therefore that it should hold other fields that are still unknown for this reason.

The geology of the Rocky Mountain region is so different from any other oil region in this country that some knowledge of geological conditions here is necessary to every oil man who considers operating. Back in the Eastern fields, the geology is hidden to a great extent and requires technical study to seek out the structural details that the average oil operator is not capable of. The same is true to a lesser extent in the Mid Continent, but in the Rockies, the structures that do show on the surface, usually stand out so plain that they can be read by the veriest tyro. This is aptly illustrated in Teapot Dome, where one can stand in the central part of the structure and see the whole rim rock of the Parkman forming an escarpment about the field. Salt Creek is another and so is Grass Creek. Elk Basin is a hole in the ground and once down in this hole, anyone can readily read the structure like an open book.

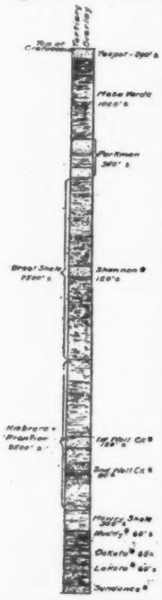

Fig. 3 — Geological column of Cretaceous for central and northeastern Wyoming. Sands marked • are oil bearing.

These fields were easy to find and resulted in the great development of the past 10 years. Very little attention has been paid, however, to other districts where the geology is not clearly shown on the surface.

Three Great Divisions

One of the first items to be learned about geology in the Rocky Mountain region is the three great divisions of interest to the oil operator, the Tertiary, Cretaceous and Carboniferous. The Carboniferous strata were laid down upon the Cambrian in this region and then came the Cretaceous period on top of the Carboniferous; then after the salt seas of prehistoric times had ebbed away from the top of the Cretaceous, the face of this region was covered with fresh waters that laid down the Tertiary strata on top of the other two. The Cambrian below the Carboniferous is considered having no interest to the oil operator. All the oil and gas production comes from either the Carboniferous or Cretaceous, with a few freak fields in the Tertiary, probably caused by fault planes through the Tertiary into the Cretaceous beds that permitted the oil to follow the line of least resistance upwards from the Cretaceous sands to sand lenses or shale pockets in the Tertiary strata.

If the Tertiary covering had remained in place over this region, the likelihood of there ever being any oil development here would have been small. The Tertiary covering has a thickness of 10,000 feet at times so it would have been impossible to drill through this covering.

After the Tertiary was in place, the fresh water seas receded as did the Cretaceous seas before and the land rose in altitude, it is still rising about four feet a century. Then came the period of erosion, the soft shales of the Tertiary offered but little resistance to the waters that fell as rain or came down from the north as ice and much of the great Mississippi Valley contains alluvial deposits built up with material taken from the region we call the Rocky Mountain region. In some places the erosion cut down through the Cretaceous to the Carboniferous. This is shown in the accompanying ideal geological section, Figure 1.

Original Surface Remains

In a few places, it is possible to still see where the original surface of the Tertiary existed before the erosion took place. The Pumpkin Buttes in southern Johnson County, Wyoming, consist of four great mesas standing out in the middle of a great plain. The tops of these buttes are flat and smooth, showing clearly the traces of the inland sea bottom they once were a part of. They stand out like solitary mountains above the plain at their feet, and are located about 40 miles north of the Salt Creek Field.

Now the oil structures were formed in the Cretaceous strata before the Tertiary beds were laid down over them. Therefore any movement of the strata in the Cretaceous is completely hidden where a Tertiary overlay is in situ. Structures have been found in this region through the geologist happening upon a small exposure of rock only a few feet in length, and protruding through a thin Tertiary covering. Drilling with small machines revealed a well developed structure completely hidden, in the Cretaceous strata that came within a few feet of the surface and outcropped in one place. See Figure 2.

When the mountains pushed up through the surface in this region, the upthrust broke up and laid open the strata adjacent to the ranges. This upturned and broken mass offered but little resistance to erosion so that the structures of the known fields follow the mountain ranges in a general way. This has also led some to conclude that the oil fields are directly related to the mountain uplifts in some manner. However, this theory has been disproven, though it is true in part. Fields exist far from any mountain uplift. The erosion un-

(Continued on Page 111)

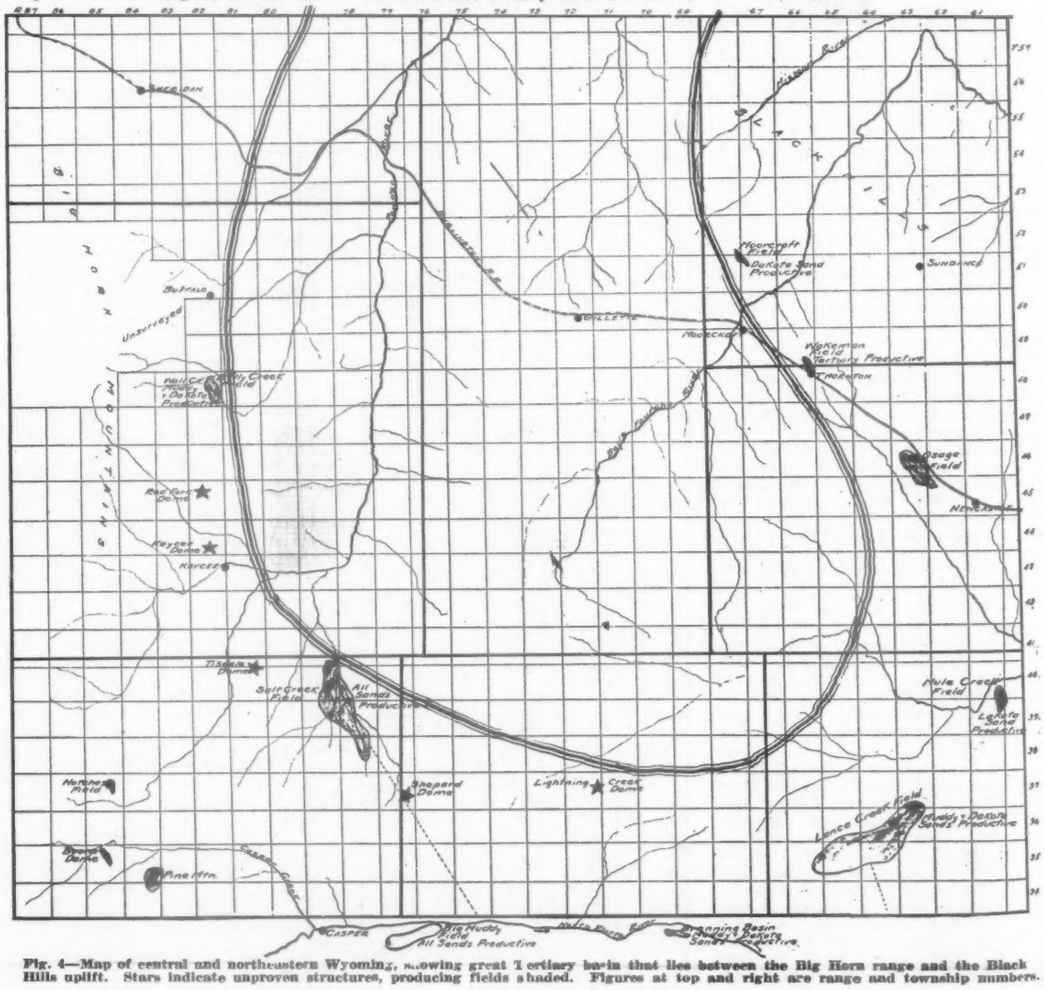

Fig. 4—Map of central and northeastern Wyoming, showing great Tertiary basin that lies between the Big Horn range and the Black Hills uplift. Stars indicate unproven structures, producing fields shaded. Figures at top and right are range and township numbers.

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OIL MEN SHOULD BE ON GUARD

The oil industry has a special interest in the Interstate Commerce Commission hearings at Chicago involving a reexamination of the railroad rate structure of the country.

Congress, during its recent session, on the pretense of "doing something for the relief of the farmer" directed the Commission to consider rate making in an entirely new light. Heretofore rates have been supposed to be based on the cost of the service and a fair return to the railroads. Under the Hoch-Smith resolution, "the true policy in rate making," is suggested to consider "the conditions that at any time prevail in our several industries with due regard to the general and comparative levels in market values of the various classes and kinds of commodities over a period of years."

If this plan were acted upon it is not improbable that we should have railroad rates on differing commodities see-sawing up and down with the farmers relieved at the expense of the oil industry and some industries being assisted by reduced rates while others were penalized by the imposition of higher rates, for the prosperity won by their own efficiency.

This interpretation of the Hoch-Smith resolution was placed before the recent meeting of the American Bar Association by K. F. Burgess, general counsel of the Chicago, Burlington & Quincy Railroad, who said the new policy, if adopted, would make the Interstate Commerce Commission the economic dictators of the country.

It would mean that the relative prosperity of different industries would be weighed from time to time and the freight rate burden shifted from the less prosperous to the more prosperous, any adverse effect of the law of supply and demand upon a particular industry being counterbalanced by a reduction in freight rates.

On the other hand, should some industry be found enjoying greater prosperity it could be curbed by increasing the freight rate on its commodity.

Congressional zeal for regulation hastily approved this theory, attracted, no doubt, by the thought that it offered another method for controlling business. The idea that the farmer could be relieved while other industries paid more was just what might be expected to appeal to the radical element in Washington anxious to pose as friends of the agriculturalist.

It is curious, as Mr. Burgess recalled, that 15 years ago the western railroads were, themselves, probably unconsciously, paving the way for some such theory. These roads were then urging increased rates based not on the cost of the service but on the value of the service to the shippers.

But the Interstate Commission dismissed that plea, Commissioner Lane saying this theory would give the commission power to determine zones of production and consumption, the profits of the producer and the cost to the consumer, presumably with authority to enter the books of every enterprise the railroad serves and to raise and lower rates accordingly without respect to the railroad's earnings but solely with respect to the earnings of those whose traffic it carries.

Anyone can see how preposterous that sort of thing would be but the Hoch-Smith resolution seemingly aims to revive it to the extent of having rates revised according to the prosperity or lack of prosperity of different industries or businesses or sections of the country.

Besides this general reexamination of rates under the Hoch-Smith resolution the railroads operating west of Chicago and the Mississippi River have petitioned for authority to increase freight rates to make up a "deficiency" in revenue of $181,000,000 below the "fair return" of 5¾ per cent allowed by law.

Rates would have to be increased 11 per cent on all traffic to make up this alleged deficit but if livestock and agriculture are to be given preferential treatment as suggested by the Hoch-Smith resolution, either by reduction or retention of the present rate, while rates are raised on other commodities, including oil, this would mean that these other commodities must pay more than an 11 per cent increase to make up the difference.

It appears to be admitted that the northwestern lines need additional revenue but it is urged by shippers that the southwestern and some of the central western lines are not in any such need and that the railroads, as a whole, are using the less favorable condition of the northwestern roads to obtain an increase for all western lines.

The Mid-Continent oil industry is specially interested in southwestern rates. If there is any upward revision of rates it must be remembered that there is always the disposition to regard the oil industry as the goose that lays the golden egg and the impulse to burden it with additional imposts.

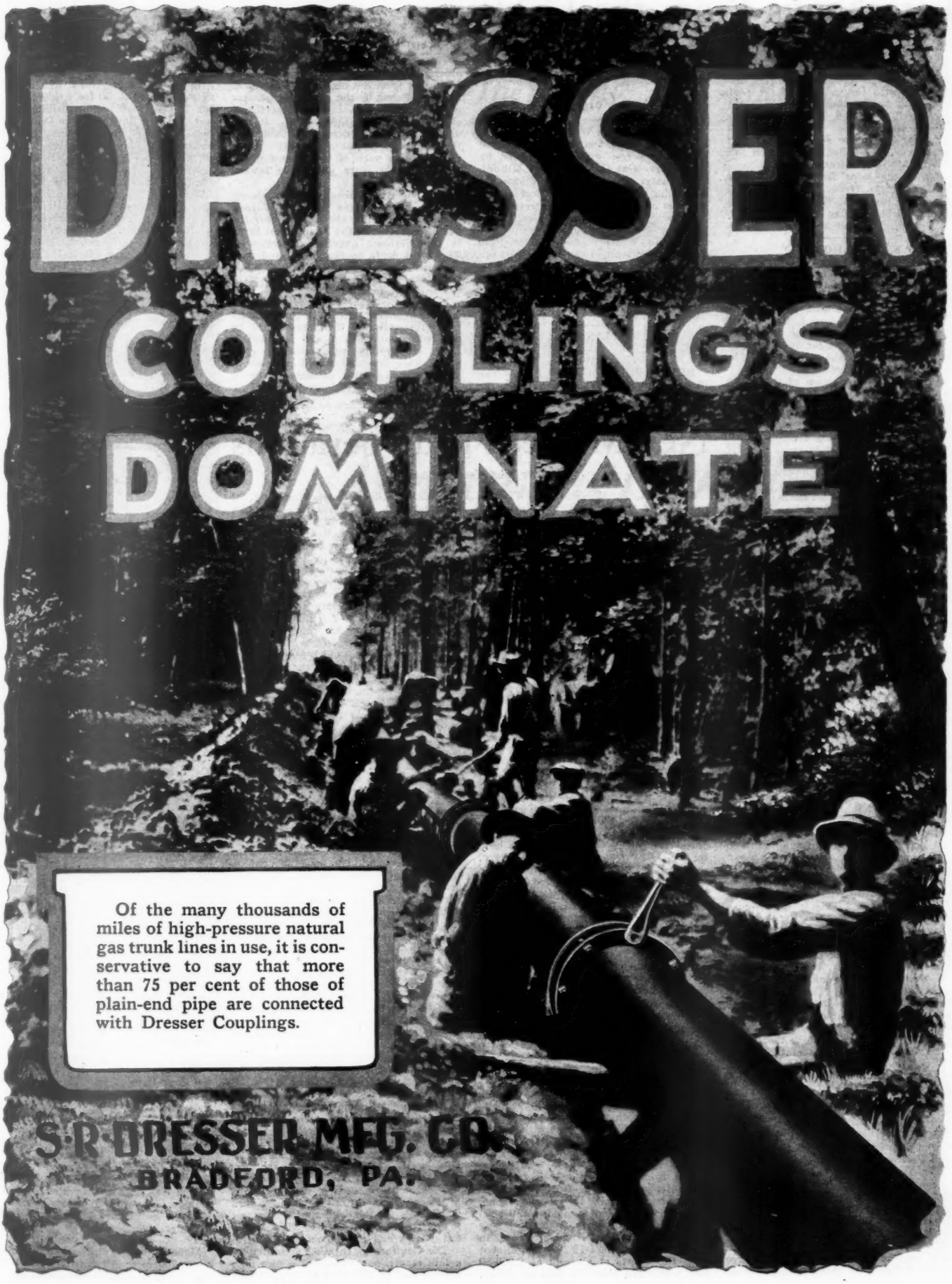
The recent controversy within the industry over oil rates in the southwestern groups should be an object lesson. Each group sought its own advantage and the outcome of the hearings will be higher rates for the carriers if the examiner's report is approved.

If that sort of controversy within the industry is carried into the hearings at Chicago with the various sections set against each other the oil industry will very materially weaken its case and invite whatever happens to it. It would be less dangerous to stay out of the hearings altogether than to appear with divided and opposing arguments.

In the hearing on advancing western rates the western industry should act as a unit while in the Hoch-Smith hearing the American Petroleum Institute should voice the unanimous views of the petroleum industry.

The welfare of the industry as a whole is of more moment than temporary advantage to any one section because experience has shown that no section can be permanently prosperous in the oil business at the expense of other sections.

Even California flooding the eastern markets and competing in export trade finds its own prices affected when the Mid-Continent market droops.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Late News From the Fields

KANSAS

In the Rainbow Bend Pool, the Marland Oil Co.-Independent Oil & Gas Co.-Waite Phillips Co., owners of the pool, have completed another good well in No. 4 Caldwell, NW cor. NE NW, Section 28-33-3, which flowed 17 bbls. the first half hour and made 837 bbls. the first day after it was drilled in. Sand on this well is 3,185-3,214 feet.

Across the river from the Rainbow Bend Pool, the Gypsy Oil Co.'s No. 1 Hunt, NE cor. NW, Section 21-33-3, is making 85 bbls. a day from sand 3,212-3,217 feet. The well is being drilled in.

OKLAHOMA

The Herbert Oil Co.'s No. 1 Community, in the South Braman Pool, has gone dead. This well, which was the discovery well of the pool, has produced a lot of oil and it is now being swabbed in an effort to bring back the flow. The swabbing has failed so far and the daily production made by the swab is 418 bbls. and 80 bbls. of water.

A list of the production of the South Braman wells follows:

Comar Oil Co., No. 1 Bechtel	5,543
Comar Oil Co., No. 2 Bechtel	3,259
Comar Oil Co., No. 3 Bechtel	25
Comar Oil Co., No. 1 Johnson	1,280
Comar Oil Co., No. 1 Horne	2 630
Comar Oil Co. No. 2 Horne	2,029
Comar Oil Co., No. 3 Horne	20
Comar Oil Co., No. 1 McCullough	251
Herbert Oil Co., No. 1 Community	418
Herbert Oil Co., No. 2 Community	15
Herbert Oil Co., No. 3 Community	8
Shawver and others, No. 1 Townsite	3
Wentz Oil Corp., No. 1 Andrews	181
Total	15,662

Oswego Lime Well

In the Garber Field, the Sinclair Oil & Gas Co. has another Oswego lime well in No. 20 Kisner which found the lime some time ago, and now had found the second pay. This well is in the NW cor. NW Section 19-22-3w, and is a direct east offset to the Sinclair Oil & Gas Co.'s No. 25 Belveal, the discovery well in the deep sand. The 20 Kisner had the second pay in the lime 4,175-81 feet and made 1,700 bbls. the first 11 hours. It is flowing at the rate of 150 bbls. an hour. The Sinclair Oil & Gas Co. has also completed a Wilcox sand well, No. 20 Walker, SW cor. NE Section 13-22-4w. This well offsets the Roxana Petroleum Corp.'s No. 1-W Wolfe and the Sinclair well made 900 bbls. the first 11 hours, and is flowing at the rate of 82 bbls. an hour from sand 4,381-90 feet.

The Twin State Oil Co. has found another new sand in the Thomas Pool, in No. 4 Siler NW cor. NW Section 22-25-2w. It was found 2,454-55 feet and the well is making 7,000,000 feet of gas and spraying oil.

In Osage County, the Tidal-Osage Oil Co.'s No. 1 NW cor. SW Section 11-21-10 found sand 2,310-15 feet and is flowing 35 bbls. an hour. This is in the pool opened up some time ago by the Mid-Kansas Oil Co.

Near Beggs, the T. A. Johnston Co. has a well that may open up another Wilcox sand pool. It is No. 1 SW cor. SW Section 10-15-12 and the sand was found 2,635-46 feet. The well is estimated at 100 bbls. as it stands and drilling was stopped in the hard shell that overlays the good pay.

North of the Papoose Pool, the Burke-Greis Oil Co.'s No. 1 Bruner C NE SW SW Section 15-10-9 had the Dutcher sand 2,975-85 feet and is estimated at 150 bbls. oil and 4,000,000 feet of gas.

GULF COAST

HOUSTON, Tex., Sept. 8.—The Mecom Oil Co.'s No. 4 Taylor in the Hull Pool, quit flowing.

The Yount-Lee Oil Co. is rigging for a deep test at Spindletop on the Gladys City tract. The Gulf Production Co. has a lease on most of the blocks in the tract, but its lease provides for production above 1,500 feet only.

The Rio Bravo Oil Co.'s No. 1 Settegast, on the west side of the Pierce Junction Dome, is showing some oil in a sand around 3,850 feet. The bit will be sent deeper into the sand to see if it justifies a test. It is about 1 mile across the dome from production.

WEST VIRGINIA

CLARKSBURG, W. Va., Sept. 8.—A depth of 6,731 feet has been reached in the deep test well being drilled by the Reserve Gas Co. near West Milford, this county, and drilling operations are continuing at the rate of 50 feet a day. Samples of sand struck at intervals are being sent to the State University Experiment Station at Morgantown, and the company's laboratories in Pittsburgh, Pa. Both water and gas for drilling operations are being taken from the hole, a strike of gas having been made in the Speechley sand, and the surplus of 1,000,000 feet a day is being turned into the company's pipe lines.

ILLINOIS

By Whit

BRIDGEPORT, Ill., Sept. 8.—The bringing in of a 500-bbl. gusher in the Allendale Field of Wabash Township, Wabash County, Illinois, caused a great amount of excitement, due to the well being in advance of production to the north and east.

The well was drilled by Risley and others, 200 feet from the north line and 1,000 feet from the east line of the S. J. Stillwell farm, in the southeast quarter of Section 1, about 1½ miles northeast of Allendale, along Coke Creek. It was drilled to a total depth of 1,389 feet, the oil being found somewhat higher than in other parts of this township and makes it look more productive toward the Wabash River.

The wildcat is about 3 miles almost direct east from the original Wabash County well, drilled about 1911, near the northeast corner of the Adam Biehl farm, in the southeast quarter of Section 4. The usual depth to the Biehl sand over the township ranges from 1,440 to 1,600 feet, both to the west and southwest of the Stillwell farm well.

The Allendale Field is a very peculiar one as a gusher can be found, usually a crevice well and then surrounded by dry holes, but when a well is found it holds its average production in good shape. This new well should bring about an extensive drilling campaign between Allendale and the Wabash River.

New Mexico Field Operations

By Staff Correspondent

ARTESIA, N. M., Sept. 5.—Wildcatting east of the Pecos River is expected to be greatly stimulated as the result of the bringing in of the No. 1 Wheat well of T. V. Petroleum Co., of Chicago. Located 2½ miles east of the Pecos River and 1,500 feet west of the Toyah-Bell well and 4 miles west of the Dixie Land well, the new producer is the rankest kind of a wildcat, although in an area which has attracted attention since 1920. The exact location, according to the map, is in the SE cor. of Section 82, W. & N. W. Railroad Co. survey, Loving County, Texas. Spudded in January 27 of this year the crew has had more or less difficulty in getting the hole down, due chiefly to the fact that it is several hundred miles from supply houses. After encountering a gas sand at 4,110 feet, the well passed into a black shale and lime, which is believed to be the Delaware Series of the upper Pennsylvania. With the bit 3 feet in the sand, encountered at 4,260 feet, the hole filled rapidly with fluid and in 24 hours made a flow gauged at 28 bbls. A good gas pressure has been causing the hole to spray considerably and will probably be drilled to completion during the coming week. Casing has been set at 4,017 feet, this being 6⅝-inch, short collar 24-pound pipe. Considerable storage has also been erected. Scouts and land men of nearly all the major and larger independent companies have been watching operations for the past week. Indications are good that the well will make a nice producer, although little acreage has changed hands, the largest buy being made by the Pure Oil Co., which purchased some close-in stuff for $100 an acre.

Artesia Production Up

In the Artesia area production has again been increased by the completion of a number of wells all located in the proven territory. To Flynn, Welch & Yates goes credit for bringing in three of the producers, their Nos. 21 and 22 located in Section 21-18-28 ranking among the best completions in the field. The pay in both wells was found at approximately 2,080 feet and extended to 2,110 feet. Shot with 120 quarts each, they responded rapidly and are now making 250 bbls. on the gauge. This company's No. 16 in Section 9-18-28, after encountering 500,000 feet of gas at 1,980 feet, was drilled to the Roswell sand, and following a shot is making 150 bbls.

Snowden-McSweeney-McNutt have completed their Nos. 4 and 5, located in the SW¼ Section 21-18-28. No. 4, shot with 100 quarts of glycerin at 2,056-80 feet, made 175 bbls. the first six hours. No. 5, shot with 25 quarts from 1,987-92 feet and with 75 quarts from 2,011-28 feet, is estimated at 150 bbls.

The Danciger Oil & Refining Co. completed its best producer in the field, this being No. 2 Cummings in Section 17-18-28. Shot with 200 quarts of gelatin from 2,103-40 feet, the well cleaned itself four hours later and is now flowing by heads.

The Ohio Oil Co. also completed a light well in its No. 2 Gilliland in Section 29-18-28. Sand, according to the log was from 1,997-2,007 feet, with the hole standing 300 feet in fluid before shooting

On the south end of the field, the Mesa Oil Co. in Section 4-19-28, has failed to pick up the pay but will be drilled to 2,200 feet.

West of Carlsbad

West of Carlsbad, the Ohio Oil Co. is installing a new drilling engine on No. 1 Tracy and rebuilding the derrick. This test, in all probability, will be the deepest drilled in southeastern New Mexico, as it is the intention of the company, according to an authentic report, to carry the hole to 6,000 feet if possible, as it is at this depth the Pennsylvania is supposed to be. A deep test will also be made of the D. C. Cheesman No. 1 in Section 35-18-28. The machine used on this well will be replaced by a standard derrick and heavy equipment and the hole carried to 4,500 feet. Cheesman will also drill two other tests, one of these being located in the NW NW, Section 34-18-28, and the other being on the Massey permit in Section 21-18-29, this latter to be a 2,500-foot test.

The Arkansas Fuel Oil Co., drilling in the extreme southwestern section of Chaves County on Manning Dome, in Section 14-1-17, has encountered a good oil sand at a depth of 1,600 feet. It is believed it might make a small producer at this depth. However, the well will be carried down to a depth of 3,500 feet, unless oil is found at a lesser depth.

The Standard of California's No. 1, located in Section 24-10-28, near the town of Hagerman, has suspended operations at a depth of 3,400 feet, after encountering salt water at 3,354 feet. It is expected the hole will be abandoned and a new location made approximately 6 miles west.

The Hope Development Co. of Hope, N. Mex., has closed a contract with Whitney Brothers of Wichita, Kans., which calls for the drilling of a deep test in the NE SE, Section 4-18-23. A standard derrick and cable tools will be used.

The Continental Oil Co., according to a late report, has completed a nice high gravity well in San Juan County. While no gauge has been taken, the well is reported to be good for several hundred barrels, production coming from a sand encountered at 1,370 feet, or about 400 feet deeper than the average well in the Hogback area. This is 63 gravity oil.

Drilling Report—Eddy County

Bailey & Cragin's No. 1, Randolph permit, drilling at 2,250 feet; George Boob's No. 3 Thompson permit, drilling at 600 feet; No. 4 drilling; Braden Oil Co., Section 27, drilled to 2,500 feet, preparing to use gas; Hugh Burch's No. 1, Section 19, validated 500-foot hole; D. C. Cheesman's No. 2 in Section 34, rigging up; No. 1 on Massey permit, moving rig for 2,500-foot hole; Cheesman's No. 1, Section 35, erecting standard derrick, will drill to 4,500 feet; California-Reiff's No. 1, Reiff permit, no report; Colorado Drilling Co.'s Irvin No. 1, shut down at 650 feet; Danciger Oil & Refining Co.'s No. 2, Section 17, cleaning out after shot; No. 3, top pay struck at 2,000 feet, drilling at 2,065 feet; No. 2 in Section 18, drilling below 1,970 feet; Danciger's No. 2 in Section 17, below 150 feet; Danciger's No. 2 Kaseman rigging up; Dome Oil Co.'s No. 2 in Section 21, drilling below 1,700 feet; Flynn, Welch & Yates' No. 16 in Section 9, cleaning out after shot; No. 22, Section 21, on production; No. 23 in Section 21, drilling; No. 24 spudding in; No. 25 drilling; No. 26 drilling; No. 28 drilling below 1,200 feet, gas at 685 feet; No. 27 rigging up; Fletcher & Agnew, on Flynn, Welch & Yates acreage, drilling below 1,400 feet; Hogan's No. 1 Johnson drilling below 2,100 feet; Keely No. 1, in Section 26, validated 500-foot hole; Monita No. 1 Cronin permit, drilling below 2,095 feet; Maljamer No. 9, Section 28, drilling at 1,550 feet; No. 10 drilling below 1,100 feet; No. 11 drilling at 400 feet; Mesa Oil Co.'s No. 1, Section 4, drilling at 2,050 feet; Ohio Oil Co.'s No. 1 Tracy permit, pulling 10-inch casing at 4,210 feet, installing drilling engine, will be carried to 6,000 feet; Ohio Oil Co.'s No. 1, McCullough permit, drilling below 1,720 feet; Toomie-Allen No. 2, drilling at 2,068 feet; Ohio-Johnston No. 1, Johnston permit, drilled 510-foot validation hole; Ohio-Toomie Allen No. 3, pumping 125-bbl. production; Ohio-Toomie-Allen No. 4, drilling at 1,900 feet; Ohio-Gilliland No. 2, drilling below 2,065 feet; Pueblo Oil Co. in Section 4 drilling at 2,035 feet; Pioneer Oil & Gas Co., Section 36, no report; Quillin, Drill Brothers, Section 11, no report; A. H. Rumage No. 1, Section 31, below 2,050 feet; Snowden-McSweeney No. 1, McNutt permit, drilling at 3,500 feet; Snowden-McSweeney's No. 2, Section 33, cleaning out after shot; No. 4, Section 21, on production; No. 5 cleaning out; No. 6 drilling at 1,450 feet; Stephens No. 1, Section 19, spudding in today; Smith & Dill Brothers in Section 20, drilling after spudding in Monday; Thompson & Workman, Section 5, shut down at 2,340 feet waiting for material; Texas Production Co.'s No. 2 Levers, cleaning out after shot; Williams Petroleum Co.'s No. 2 drilling below 500 feet; V. K. F. Oil Co.'s No. 4 in Section 17, moving tools; No. 5 building derrick.

Chaves County

Arkansas Gas & Fuel Co.'s No. 1, Manning Dome, in Section 14, drilling below 1,600 feet; Carl Dresser's No. 1, Section 24, pulling casing; Standard of California's No. 1, Hagerman pulling pipe at 3,300 feet; Buffalo-Roswell No. 1, fishing; Franks No. 1, drilling below 500 feet; Campbell No. 1, no report.

Lea County

Covert and others' No. 1, drilling at 400 feet; Tilton, Croft No. 1, setting casing; Ross No. 1, setting 12½-inch casing and drilling at 800 feet; Homes Huey No. 1, shut down at 610 feet for new cable; Ward No. 1 drilling below 700 feet; Wyatt No. 1, drilling; New Mexico Producer's No. 1, shut down.

McKinley County

Union United No. 1, Section 30, fishing around 500 feet; Colonel Pierce's No. 1, fishing; California Syndicate, Section 1, drilling; Seven Lakes' No. 1, shutting off water.

Rio Arriba County

Munoz-Continental, Section 25, drilling below 750 feet; Albuquerque No. 1, setting 8-inch casing.

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Natural Gasoline Control Centralized

Bulk of Casinghead Production of United States Gradually Is Playing Into the Hands of Few Larger Companies. Smaller Firms Are Merged

By Neil Williams

Although the natural gasoline industry of the country is expanding by leaps and bounds, control of the natural gasoline supply gradually is becoming more centralized. The ratio of individual companies to the amount of production is decreasing, while, on the other hand, more and more of the gasoline output is being placed in the hands of a comparatively few large companies.

This was revealed in The Oil and Gas Journal's annual review of natural gasoline plant operations when it was learned that 33 companies, each having a daily potential gasoline output of 30,000 or more gallons, control 65.4 per cent or nearly two-thirds of the total natural gasoline capacity of the country.

This is especially significant when it is known that there is a total of 503 companies manufacturing natural gasoline and 33 companies, controlling 65.4 per cent of the entire natural gasoline output, comprise only 0.068 per cent, or a very small percentage of the total number of companies.

As is shown in the accompanying table, the 33 companies, having potential natural gasoline output of 30,000 gallons or more daily, have a total daily capacity of 3,045,065 gallons, while the total capacity of all plants in the country is only 4,652,561 gallons. This would leave the remaining 470 companies with a total capacity of only 1,607,493 gallons daily, or just slightly more than a third.

Ten Largest Companies

The centralization of the natural gasoline supply control is revealed more conclusively in the fact that out of the 33 companies mentioned, the 10 largest companies have 58.4 per cent of the possible production or considerably more than half. Also, these 10 companies control 37.8 per cent of the entire natural gasoline output of the country. The 10 companies have a total of 1,760,630 gallons capacity daily, while the total for the entire 503 companies only comparatively little more, or 4,652,561 gallons.

In connection with this, it is interesting to know that each of the 10 companies has a daily natural gasoline production capacity of 100,000 gallons or more. Also, they are the only companies which do have this much capacity each, the remaining companies having production of under 100,000 gallons daily each.

From these figures it can be seen readily that the 33 companies, having a production of 30,000 gallons or more daily, and especially the 10 highest companies, actually control the bulk of the natural gasoline production of the country. The remaining 470 companies, having an average production of approximately 3,400 gallons daily, really control comparatively little of the country's supply.

Not only do the 33 companies control the bulk of the natural gasoline production, but in line with this they own or control 370 plants or 32.4 per cent of the total of 1,143 plants in the country. This is only slightly less than a third of the plants which 0.068 per cent of the companies have.

In this connection, the 10 largest companies own or control 178 plants, or 48.1 per cent, slightly less than half of the plants owned by the 33 leading companies, and 15.4 per cent of the plants owned by all the companies in the country.

Mid-Continent Dominates

Needless to mention in connection with the leading natural gasoline manufacturers is the fact that of the 33 largest, 24 operate in the Mid-Continent, 20 of them exclusively. And, of the 10 largest companies those having a gasoline production of 100,000 gallons daily each, 6 operate in the Mid-Continent, although one of the six, being chiefly an Eastern manufacturer, has only 1,600 gallons daily production in this district. Of the 1,760,630 gallons total daily capacity of the 10 leading companies, 1,000,230 gallons is in Mid-Continent plants.

Outstanding among the natural gasoline manufacturers is the Phillips Petroleum Co. of Bartlesville, Okla. As can be seen in the accompanying table, this company is by far the largest individual natural gasoline manufacturer in the world. This company's plants, totalling 28, all of which are in the Mid-Continent, have a capacity of 378,000 gallons daily.

The nearest individual rival to the Phillips Petroleum Co. is the Chestnut-Smith interests of Tulsa, another exclusive Mid-Continent firm. The Chestnut-Smith plants, all of which are not operated under the name, Chestnut-Smith Corp., have a combined capacity of approximately 289,300 gallons daily.

Although they are listed separately in the accompanying table, the various companies controlled by the Standard Oil Co. of New Jersey would have natural gasoline production which would far surpass that of the Chestnut-Smith interests and also that of the Phillips Petroleum Co. So, if all its companies were considered as one, and in reality, the parent company controls the output of all, the Standard Oil Co. of New Jersey actually would be the world's largest natural gasoline manufacturer. If these companies had been listed as one in the table, a still further centralization of the natural gasoline supply control would have been shown.

Jersey Company Leads

Indicative of the amount of gasoline controlled by the Standard Oil Co. of New Jersey, the four New Jersey companies included in the accompanying list of the 33 largest manufacturers of natural gasoline have a combined capacity of 377,500 gallons daily or just 500 gallons a day less than the capacity of the plants of the Phillips Petroleum Co. Other New Jersey companies not inlcuded in the accompanying list would swell the total capacity far above the the Phillips figure.

However, with the New Jersey companies listed separately, one of them, the Hope Construction & Refining Co. of Pittsburgh, Pa., ranks fourth among the natural gasoline manufacturers, having a total capacity of 181,500 gallons daily. Most of this production is in Pennsylvania and West Virginia. The other three New Jersey companies, the Carter Oil Co., of Tulsa, the Humble Oil & Refining Co. of Houston, Tex., and the Standard Oil Co. of Louisiana, ranked eleventh, nineteenth and twenty-ninth, respectively.

Next to the Mid-Continent, California companies are the biggest producers of natural gasoline, four Pacific Coast companies being among the 10 largest manufacturers. They have a combined capacity of 580,500 gallons daily.

The growing centralization of the natural gasoline supply control has been particularly marked the past year with the larger companies, particularly the Phillips Petroleum Co., increasing the capacities of their plants, building new plants and buying out smaller companies. The policy of the Phillips Petroleum Co., especially, has been one of rapid expansion the past few years. Since The Oil and Gas Journal's review of natural gasoline plant operations was made August 1, that company has acquired another plant. It is the plant at Ivan, Tex., formerly owned by B. R. Parrott of Los Angeles. The new plant has a capacity of 2,000 gallons daily, which is not included in the accompanying table.

Phillips Petroleum Co. also recently purchased the three plants in North Texas formerly owned by Roeser and Pendleton and also plants of the Landreth Oil Co. in Texas. This company has increased the capacity of its Wewoka plant 50 per cent and has added two new stations to its plant in Okfuskee County. A new plant is being built at Quay by the Phillips Petroleum Co.

(Continued on Page 151)

FACTS IN NATURAL GASOLINE PRODUCTION

Total plants	1,143
Total companies	503
Total gasoline capacity (gallons)	4,652,561
Capacity plants 33 largest companies (gallons)	3,045,068
Percentage of total capacity	65.4
Capacity of 10 largest companies (gallons)	1,760,630
Percentage of total	37.8
Plants owned by 33 companies	370
Plants owned by 10 companies	178

MANUFACTURERS OF NATURAL GASOLINE WHOSE PLANTS HAVE A DAILY CAPACITY OF 30,000 GALLONS OR MORE

Companies:	Oklahoma	Kansas	Texas	Louisiana	Arkansas	Total Mid-Con.	California	Pennsylvania Illinois Ohio	West Virginia	Wyoming	Total Non-Mid-Con.	Grand Total	Total Plants
Phillips Petroleum Co., Bartlesville, Okla.	231,000	.....	138,000	9,000	.....	378,000	.....	.....	.....	.....	.....	378,000	28
Chestnut-Smith Interests, Tulsa, Okla.	56,800	2,500	230,000	.....	.....	289,300	.....	.....	.....	.....	.....	289,300	27
Pacific Gasoline Co., Los Angeles, Cal.	.....	.....	.....	.....	.....	.....	221,000	.....	.....	.....	221,000	221,000	24
*Hope C. and Refg. Co., Pittsburgh, Pa.	1,600	.....	.....	.....	.....	1,600	.....	(Pa.) 23,000	156,900	.....	179,900	181,500	26
Shell Oil Co., San Francisco, Cal.	.....	.....	.....	.....	.....	.....	138,000	.....	.....	.....	138,000	138,000	7
Magnolia Petroleum Co., Dallas, Tex.	44,450	.....	84,480	1,200	.....	130,130	.....	.....	.....	.....	.....	130,130	36
Standard Oil Co. (Cal.), San Francisco, Cal.	.....	.....	.....	.....	.....	.....	121,500	.....	.....	.....	121,500	121,500	13
Gypsy Oil Co., Tulsa, Okla.	101,000	.....	14,700	.....	.....	101,000	.....	.....	.....	.....	.....	101,000	9
Skelly Oil Co., Tulsa, Okkla.	85,700	.....	.....	.....	.....	100,200	.....	.....	.....	.....	.....	100,200	9
General Petroleum Corp., San Francisco, Cal.	.....	.....	.....	.....	.....	.....	100,000	.....	.....	.....	100,000	100,000	1
Total 10 highest	1,041,100	2,500	467,180	10,200	.....	1,000,230	580,500	23,000	156,900	.....	760,400	1,760,630	178
*Carter Oil Co., Tulsa, Okla.	83,000	.....	.....	.....	.....	83,000	.....	.....	.....	10,000	10,000	93,000	6
The Texas Co., Houston, Tex.	50,700	.....	30,500	3,800	.....	85,000	.....	.....	.....	.....	.....	85,000	14
Union Oil Co., Los Angeles, Cal.	.....	.....	.....	.....	.....	.....	80,250	.....	.....	.....	80,250	80,250	8
Sinclair Oil & Gas Co., Tulsa, Okla.	65,200	.....	8,500	.....	.....	73,700	.....	.....	.....	.....	.....	73,700	9
Mid-Continent Petroleum Corp., Tulsa, Okla.	73,400	.....	.....	.....	.....	73,400	.....	.....	.....	.....	.....	73,400	8
Lone Star Gas Co., Dallas, Tex.	.....	.....	69,500	.....	.....	69,500	.....	.....	.....	.....	.....	69,500	4
Empire Gasoline Co., Bartlesville, Okla.	19,000	50,000	.....	.....	.....	69,000	.....	.....	.....	.....	.....	69,000	10
Standard Oil Co. (Ind.), Tulsa, Okla.	67,000	.....	.....	.....	.....	67,000	.....	.....	.....	.....	.....	67,000	5
*Humble Oil & Refining Co., Houston, Tex.	.....	.....	65,000	.....	.....	65,000	.....	.....	.....	.....	.....	65,000	10
California Gasoline Corp., Los Angeles, Cal.	.....	.....	.....	.....	.....	.....	65,000	.....	.....	.....	65,000	65,000	4
Tidal Refining Co., Tulsa, Okla.	37,500	12,000	15,000	.....	.....	64,500	.....	.....	.....	.....	.....	64,500	16
McMan Oil Co., Tulsa, Okla.	24,000	.....	26,500	.....	.....	50,500	.....	.....	.....	.....	.....	50,500	3
Virginia Gasoline & Oil Co., Clendenin, W. Va.	.....	.....	.....	.....	.....	.....	.....	.....	49,850	.....	49,850	49,850	11
Roxana Petroleum Corp., St. Louis, Mo.	45,100	.....	.....	.....	.....	45,100	.....	.....	.....	.....	.....	45,100	4
Midwest Refining Co., Denver, Colo.	.....	.....	.....	.....	.....	.....	.....	.....	.....	44,500	44,500	44,500	2
Ohio Oil Co., Findlay, Ohio	.....	.....	.....	10,200	.....	10,200	.....	(Illinois) 16,838	.....	15,000	31,838	42,038	43
‡Comar Gasoline Co., St. Louis, Mo.	40,000	.....	.....	.....	.....	40,000	.....	.....	.....	.....	.....	40,000	3
Southern Carbon Co., Monroe, La.	.....	.....	.....	39,000	.....	39,000	.....	.....	.....	.....	.....	39,000	5
*Standard Oil Co. (La.), New Orleans, La.	.....	.....	.....	10,000	28,000	38,000	.....	.....	.....	.....	.....	38,000	3
Henderson Co., Tulsa, Okla.	15,000	.....	.....	.....	20,000	35,000	.....	.....	.....	.....	.....	35,000	2
Transcontinental Oil Co., Tulsa, Okla.	31,500	.....	1,000	.....	.....	32,500	.....	(Ohio) 400	1,200	.....	1,600	34,100	16
Gilliland Oil Co., Tulsa, Okla.	11,000	.....	.....	8,000	12,000	31,000	.....	.....	.....	.....	.....	31,000	5
Long Beach Gasoline Co., Los Angeles, Cal.	.....	.....	.....	.....	.....	.....	30,000	.....	.....	.....	30,000	30,000	1
Total	1,082,950	64,500	683,180	81,200	60,000	1,971,630	755,750	40,238	207,950	69,500	1,073,438	3,045,068	379

*Standard Oil Co. of New Jersey. ‡Roxana Petroleum Corp. and Mariand Oil Co.

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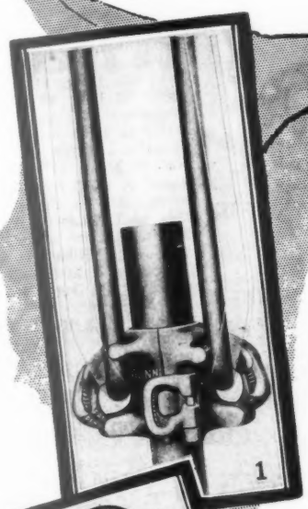

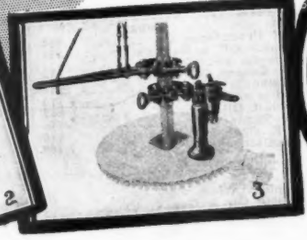

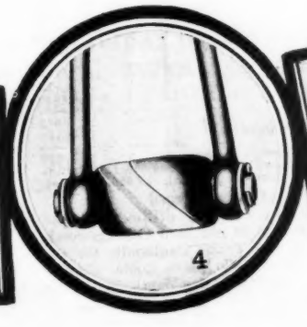

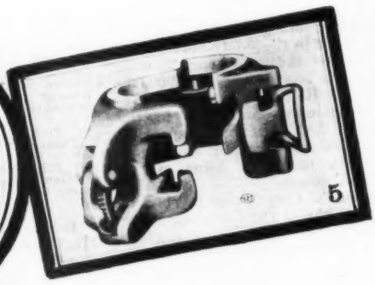

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North-Central Texas Field

By George R. Kelley

Big Lake Co.'s No. 39 University, not completed, making 5,760 bbls. and expected to make 8,000 to 10,000 bbls. Texon Oil & Land Co.'s No. 12, Group 1, flows 60 bbls. an hour and No. 19 makes 720 bbls. a day. Gulf Co.'s Carson County well makes 60 bbls. daily. Texas & Pacific Co., 320 bbls. in 12 hours.

FORT WORTH, Tex., Sept. 7.—The North Central Texas oil fields set another high mark in the number of completions for this week, turning in a total of 120 against the previous high records for the year of 111, which was marked up four weeks ago. This remarkable record, together with a few scattered high spots of interest are the main features of the week's development.

The Big Lake Oil Co. has brought in another big producer in the Reagan County district, No. 39 University. It is well within the proven area of the Big Lake acreage and a good producer was naturally to be expected. The well, however, is far above the average wells of the field in initial production, though it has not been listed as a completion. It got the top of the pay at 2,871 feet and has been drilled into it only 6 feet. It is flowing at the rate of 240 bbls. an hour or 5,760 bbls. daily. Indications are it might make as high as 8 000 or 10.000 bbls. when drilled into the sand. This is the largest well in the field for several months and should bring about a handsome increase in the output of Reagan County when connected with the pipe lines.

In the same field the Texon Oil & Land Co. has two new producers, neither of which has been completed. No. 12 Group 1 University, reported showing oil last week, is now flowing at the rate of 60 bbls. an hour and No. 19 Group 1 Unversity is a new producer having 720 bbls. the first 24 hours.

Texas Panhandle

In the Texas Panhandle there are a number of wells nearing the completion stage, all of which have ear marks of being producers. The Gulf Production Co.'s No. 9 Burnett, in Carson County, is swabbing at the rate of 60 bbls. daily while preparations are being made to drill deeper. In the same county The Texas Co.'s No. 5 Burnett is being put on the pump, according to latest reports. It swabbed about 470 bbls. of oil on a four-day test.

In Wheeler County, Rook and others' No. 1 Phillips is in the sandy lime formation at 2,293 feet and is spraying 25 bbls. of oil daily and is also making 2,000,000 feet of gas. J. R. Phillips' No. 1 Kingsland in Hutchinson County is in the sandy lime at 2,800 feet and is spraying 20 bbls. of oil and showing some gas. The eight-inch casing is being set in order to drill deeper.

The Gibson Oil Corp.'s No. 1 Whittenburg on the banks of the Canadian River in Hutchinson County is being spudded in. The derrick has been completed for the first of two deep tests to be drilled by Homer F. Wilcox of Tulsa in Texas County, Oklahoma, near the town of Goodwell.

A close watch is being kept on developments in Loving County, though nothing of particular importance is reported since last week. The P. V. Petroleum Co.'s No. 1 Chapman has been drilled deeper from 4,212 feet to a total depth of 4,263 feet and oil is standing to within 300 feet of the top of the hole. It has also made one flow.

In the south half of Stephens County the Texas Pacific Coal & Oil Co. has brought in a good producer in No. 2 Hand. It is producing from the Ranger pay at 3,705 feet to 3,710 feet. On the first test of 12 hours it made 320 bbls.

Developments are moving along rather slowly in the new Cross Plains Field in Southeastern Callahan County. Wakefield and others' No. 1 Block 31, Cross Plains townsite, is showing for a fairly good producer. The well has been drilling 1 foot into the sand topped at 1,427 feet and has made three or four heads.

In Wilbarger County the Landreth Production Co. is nearing completion with two of its wells on the Waggoner Ranch. No. 3-B Waggoner is making 130 bbls. daily from sand at 2,087 to 2,090 feet and No. 1-A Waggoner is standing 1,700 feet in oil at 1.851 to 1.864 feet.

Average Daily Production

In spite of the large number of completions in the territory for the week, average daily production showed a decline of 1 224 bbls. The total daily average is 168.695 bbls. while the previous week the average was 169.919 bbls.

Out of the total of 120 completions listed, 71 were oil producers, 47 were failures and 2 were gas wells. The 71 oil producers had a new production of 9 082 bbls., compared with a new production the previous week of 9,189 bbls. from 38 completed oil wells.

As usual, Archer County stands far out ahead of any other district in the number of completions. This county reported a total of 41 completions while Wichita County reported 21 and Young County 13. Wilbarger County recorded 10 completions and the wildcat districts, a total of 21.

Out of 29 producing wells in Archer Countl, there is 1,753 bbls. of new production. Three completed producers in Reagan County had a total new production amounting to 4,448 bbls. pretty nearly 50 per cent of the entire new production.

Completions by Districts

The following table gives the completions by districts for this week, together with this and the previous week for comparison:

District—	Comp.	Prod.	Dry	Gas	Prod.
Wichita	21	14	7	0	810
Wilbarger	10	4	6	0	376
Archer	41	29	12	0	1,753
Young	13	7	6	0	496
Stephens	3	0	3	0	....
Eastland	3	2	1	0	215
Brown	5	1	3	1	*105
Reagan	3	3	0	0	4,418
Wildcats	21	11	9	1	*909
Total	120	71	47	2	9,082
Total last week	101	62	38	1	9,189
Difference	19	9	9	1	107

*Gas. Brown County, 6,000,000 feet; wildcats, 20,000,000 feet; total, 26,000,000 feet.

Casing Record

Devore & Latimer drilling on the Hughes Ranch in northern Collingsworth County, in the Texas Panhandle for the Continental Oil Co. have made what is said to be a record for depth in setting large casing. A total of 1,225 feet of 12½-inch casing has been successfully set in this hole. There are instances, of course, where 1,000 feet or as high as around 1,100 feet of this size casing has been set but no record, at least in this territory of as much as 1,225 feet.

Another interesting story has crept out about this well. It has gained considerable circulation and is interesting whether true or not. With the hole 1,130 feet deep and 1,052 feet of 12½-inch casing in it, the casing was broken off seven joints from the bottom. This occurred on the same day as the recent earthquake disturbance in the Texas Panhandle and in the story circulated now is that the earthquake parted the casing. The contractors declare they do not know what caused the casing to part and are not giving much credence to the story that it was caused by the tremor, although it occurred on the same day. The seven joints of casing have been side tracked and the hole is now down 1.660 feet with no sign yet of the big lime.

Gross Production

Estimated daily average production for the week ending September 3:

Burkburnett

Gulf Production Co.	580
Humble Oil & Ref. Co.	420
Magnolia Pet. Co.	2,815
Pannandle Ref. Co.	310
Prairie Oil & Gas Co.	25
Sinclair Oil & Gas Co.	52
Sun Oil Co.	100
The Texas Co.	460
Texhoma Oil & Ref. Co.	450
Miscellaneous	8.980
Total	14.192

Electra

Empire Gas & Fuel Co.	985
Gulf Production Co.	850
Humble Oil & Ref. Co.	155
Magnolia Pet. Co.	3,830
Panhandle Ref. Co.	50
Prairie Oil & Gas Co.	120
The Texas Co.	3.665
Texhoma Oil & Ref. Co.	1.670
Miscellaneous	6.041
Total	17.366

Iowa Park

Gulf Production Co.	40
Humble Oil & Ref. Co.	410
Magnolia Pet. Co.	620
Panhandle Ref. Co.	34
The Texas Co.	695
Texhoma Oil & Ref. Co.	45
Miscellaneous	4,055
Total	5.799

Archer County

Empire Gas & Fuel Co.	930
Gulf Production Co.	2.275
Humble Oil & Ref. Co.	770
Magnolia Pet. Co.	1,622
Panhandle Ref. Co.	205
Prairie Oil & Gas Co.	3.770
Sun Oil Co.	90
The Texas Co.	2.931
Texhoma Oil & Ref. Co.	2.230
Miscellaneous	22.375
Total	37.198

Stephens County

Empire Gas & Fuel Co.	65
Gulf Production Co.	1.400
Humble Oil & Ref. Co.	760
Magnolia Pet. Co.	485
Mid-Kansas Oil & Gas Co.	1.445
Prairie Oil & Gas Co.	905
Sinclair Oil & Gas Co.	90
Sun Oil Co.	230
The Texas Co.	1.460
T. P. Coal & Oil Co.	1.155
Miscellaneous	6.133
Total	14.128

Ranger

Gulf Production Co.	285
Humble Oil & Ref. Co.	48
Magnolia Pet. Co.	675
Mid-Kansas Oil & Gas Co.	220
Panhandle Ref. Co.	176
Prairie Oil & Gas Co.	710
Sinclair Oil & Gas Co.	343
The Texas Co.	180
T. P. Coal & Oil Co.	895
Miscellaneous	2.700
Total	6.232

Moran

Empire Gas & Fuel Co.	20
Prairie Oil & Gas Co.	20
The Texas Co.	460
Texhoma Oil & Ref. Co.	105
Miscellaneous	2,644
Total	3.259

Young County

Gulf Production Co.	438
Humble Oil & Ref. Co.	1.175
Magnolia Pet. Co.	665
Mid-Kansas Oil & Gas Co.	20
Panhandle Ref. Co.	242
Prairie Oil & Gas Co.	10
Sinclair Oil & Gas Co.	354
Sinclair Oil & Gas Co.	354
Sun Oil Co.	75
The Texas Co.	1.030
Texhoma Oil & Ref. Co.	140
Miscellaneous	7.124
Total	11.273

Eastland-Comanche

Empire Gas & Fuel Co.	13
Humble Oil & Ref. Co.	165
Magnolia Pet. Co.	1.015
Mid-Kansas Oil & Gas Co.	330
Prairie Oil & Gas Co.	135
Sinclair Oil & Gas Co.	30
The Texas Co.	155
T. P. Coal & Oil Co.	110
Miscellaneous	1.722
Total	3.575

Panhandle

Carson Co.	2.565
Hutchinson Co.	1.587
Wheeler Co.	110
Gray Co.	66
Potter Co.	15
Total	4.342

Miscellaneous Pools

Wilbarger County	8,881
Clay County	382
Montague County	440
Jack	30
Throckmorton	150
Baylor	148
Palo Pinto Co.	619
Brown	3.100
Coleman Co.	230
Callahan Co.	2.990
Mitchell Co.	2.455
Reagan Co.	31.855
Scurry Co.	50
Total	51.330

Total this week 168.695
Total last week 169.919

Loss 1.224

Completions—Wichita County

Arco Oil Co.'s No. 2 Burett is making 8 bbls. at 349 feet; B. Deluth and others' No. 1 Jackson, dry at 1.946 feet; Fidelity Oil Co.'s No. 13 Peeler, 57 bbls. at 1.773 feet; No. 14 Peeler, dry at 796 feet; No. 15 Peeler, 60 bbls. at 1.769 feet; Fisher & Gilliland No. 5 Fisher, dry at 1,568 feet; Humble Oil & Refining Co.'s No. 19 Douglas, dry at 1.973 feet; Maer & Staniforth's No. 6 Allen & Kemp, dry at 1.800; No. 7 Allen & Kemp, making 70 bbls at 1,632 feet; O'Donohue & Gates' No. 7-B Allen & Kemp, 20 bbls. at 1,648 feet; No. 8 Allen & Kemp. 150 bbls. at 1,648 feet; Petroleum Producers Co.'s No. 12 Allen & Kemp. 8 bbls. at 1,651 feet; Petroleum Producers Co.'s No. 13 Allen & Kemp, 60 bbls. at 1,646 feet; J. P. Razor and others No. 1 Waggoner, dry at 2.005 feet; Rio Bravo Oil Co's No. 7-A Waggoner 90 bbls. at 1,412 feet; No. 3-D Waggoner 105 bbls. oil and 105 bbls. water at 1,568 feet; No. 2-G Waggoner, 38 bbls. at 1.006 feet; The Texas Co.'s No. 16 Maer, 27 bbls. oil and 27 bbls. water at 1,775 feet; Texhoma Oil & Refining Co.'s No. 2 Waggoner Brothers, 57 bbls. at 1,770 feet; White Brothers' No. 2 Mitchell, dry at 1,315 feet.

Wilbarger County

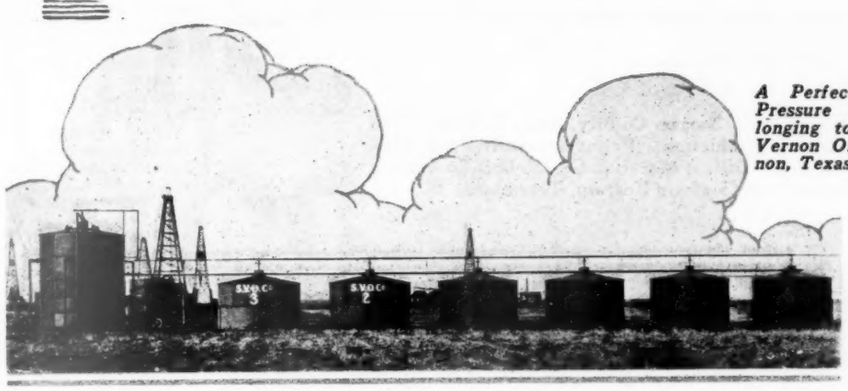
Barkley & Meadows' No. 1 Schmoker, dry at 2,800 feet; Bob Brewer and others' No. 1 Schmoker, dry at 2,800 feet; Humble Oil & Refining Co.'s No. 19 Castlebury, 120 bbls. at 2,321 feet; Independent Oil & Gas Co.'s No. 1 Reed, dry at 2,403 feet; Maer & Staniforth's No. 1 Waggoner (Section 10) dry at 2,005 feet; Petroleum Producers Co.'s No. 5 Dill, 161 bbls. at 2,307 feet; Ray and Massie's No. 7 Bond, 75 bbls. at 1,302 feet; Texhoma-Holmes' No. 2 Thomas, dry at 2,315 feet; Bob Waggoner and others' No. 3 Bond, 20 bbls. at 1,295 feet; Thelma Wells and others' No. 1 Waggoner, dry at 2,377 feet.

Archer County

Barkley & Meadows' No. 11 L. F. Wilson, 100 bbls. at 1,523 feet; Burns & Maxson's No. 7 L. F. Wilson, 30 bbls. oil and 6 bbls. water at 1,443 feet; Consolidated Oil Co.'s No. 1 Dycus, dry at 1,754 feet; J. E. Dale and others' No. 14 H. Wilmot, 25 bbls. at 906 feet; Jeffers & Newby's No. 1 Lyles, dry at 1,754 feet; T. G. Lomax and others' No. 3 Wilson, 70 bbls. at 1,520 feet; McCarty Oil Co.'s No. 2 Wilson, dry at 920 feet; McElreath & Woods' No. 1 Coleman, dry at 190 feet; Muse, Roberts and others' No. 1 Wilson, 40 bbls. at 1,518 feet; Oil Investment Co.'s No. 2 Parrish, 30 bbls. at 1,586 feet; Waite Phillips Co.'s No. 2 T. B. Wilson, 390 bbls. at 1,713 feet; No. 13 L. F. Wilson, 215 bbls. at 1,511 feet; No. 16 L. F. Wilson, 175 bbls. at 1,509 feet; No. 18 L. F. Wilson, dry at 1,541 feet; Phillips Petroleum Co.'s No. 83 White, 20 bbls. at 1,620 feet. No. 84 White, 30 bbls.; Riner & Bailey's No. 28 L. F. Wilson, 50 bbls. at 1,621 feet; Shappell Oil Co.'s No. 26 Jackson 40 bbls. at 1,804 feet; Texhoma Oil & Refining Co.'s No. 6 Taylor, 20 bbls. oil and 7 bbls. water; No. 46 S. M. Gose and others, 80 bbls. at 1,601 feet; White Eagle Oil & Refining Co.'s No. 3 Wilson, dry at 1,437 feet; Wilson Drilling Co.'s No. 2 Wilson, 12 bbls. oil and 5 bbls. water at 1,438 feet; Magnolia Petrole-

(Continued on Page 148)

PERFECTION VAPOR PRESSURE TANKS
WOOD, AND BOLTED STEEL TANKS



A Perfection Vapor Pressure battery belonging to the South Vernon Oil Co., Vernon, Texas.

Buying Protection As Well As Storage

IN making a purchase of Perfection Vapor Pressure tanks, don't think of the transaction as merely a case of spending good money for storage.

It goes a lot further than that!

It's a guarantee of protection against evaporation, against the ever-present fire menace and against a loss in gravity.

All in all, it's really not an outlay for using plain arithematic, the saving effected in a very short time will more than pay for the entire battery.

Get in touch with our representative in your field who really is a specialist in storage problems. It will not obligate you in the least, and may be the initial step that will make you thousands of dollars.

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Kentucky—Tennessee

By Vern T. Whitney

L. J. Emery & Sons' well in Gorby Pool, Barren County, flows 72 bbls. Two wildcats in Barren County showing production. Pennsylvania-Indiana Syndicate has 25-bbl. well in Swope Pool; Dillon, Marsh & Co., 25 bbls. in Wayne County. Dafoes get third producer in Tinsley's Bottom, Tennessee.

BOWLING GREEN, Ky., Sept. 7.—The feature completion in the Blue Grass State the past week is credited to L. J. Emery, Jr., and Sons, of Bradford, Pa., who finished their initial test on the Preston farm for 72 bbls. flush in the deep sand at 167 feet below the black shale. The well is southwest of Glasgow in the Corby Pool, Barren County, extending the producing territory 1,500 feet west and south of the same parties' Depp and Greer tract, one of the banner properties in the county.

In this same county two wildcat tests are on production, the Keyes Oil Corp.'s No. 1 Jump, on the lower Bowling Green Road, near the Glasgow refinery, estimated at better than 5 bbls. at 552 feet, about 180 feet below the black shale, and Whitlock and associates' No. 1 on the Richards farm, 4 miles east of Glasgow on the Edmonton pike, near the State Fish Hatchery, good for 8 bbls. at 140 feet below the shale. These late wells are of much importance to Barren County operators as the proven districts are just about drilled up.

The Pennsylvania-Indiana Oil Syndicate brought in another good producer in its No. 8 Jess Swope in the Swope Pool of the Owensboro Field. It is good for 25 bbls. from the Barlow sand and extends production to the north of No. 3 on the other side of the lease. In trying to extend the Swope Pool to the east, Powers & Cornell's venture on the F. Bowman tract proved worthless in the Barlow sand at 805 feet and was abandoned. Another wildcat test which proved unproductive is Patton and others' No. 1 J. A. Coombs,, offsetting the Hidgon tract of E. M. Treat & Co. in Daviess County.

The eastern end of the State showed one well above the average, it being Dillon, Marsh & Co.'s No. 6 J. A. Brown in District No. 3, Wayne County, good for 25 bbls. in the Beaver sand.

Tennessee Wells

Dafoe and associates completed their third straight producer on the Draper tract at Tinsley Bottom in Clay and Jackson counties, Tennessee, estimated good for 20 bbls. at 504 feet. The Pencil Cave was topped at 290 feet and drilled through at 292 feet.

Five miles to the north of Tinsley's Bottom the Young Oil Co.'s No. 1 Arms, at Bennett's Ferry in Clay County, is dry in the deep pay at 1,200 feet.

Pipe Line Being Laid

The building of the Stoll Pipe Line in Tennessee will no doubt result in a great deal of activity along its right of way. At present there is a large amount of territory along the line that is not leased up which deserves attention. It is said there are several good structures along its route, two of which are larger than the one at Tinsley Bottom. One of them is called the Flat Creek anticline, another the Roaring River anticline and a third is the Crawford's Mill anticline, a small structure about the size of the one at Dry Fork, which is the producing anticline of the Tennessee Bottom oil field.

There has been very little development in this territory as the freight rates have been prohibitive and there were no pipe line facilities until the Stoll Co. obtained attractive rates from Windle, Tenn., to Louisville, Ky., and gave the field a market outlet for its crude.

The survey of the pipe line from Tinsley's Bottom Pool, in Clay and Jackson counties, Tennessee, to Windle in Overton County, Tennessee, has been finished. This line, about 18 miles long, will consist of 2 and 3-inch pipe. The 3-inch will run from Tinsley Bottom over the top of the hills where it will connect with the 2-inch line which will have a gravity drop from the top of the cliffs down to the loading rack. From Tinsley's Bottom to the top of the hill there is a rise of 600 feet and a large pump has been set to take care of this long pull. So far, two cars of pipe have been received which has already been strung and laid, the other material is on its way and it is thought the line will be running oil about the middle of September.

Week's Work

During the past week in the Kentucky-Tennessee Field there were 36 completions, of which 23 were producers with a flush output of 290 bbls., 11 dry holes and 2 gassers. The wells were distributed by counties as follows:

County—	Comp.	Wells	Prod.	Dry	Gas
Barren	8	8	133	0	0
Owensboro district	6	2	35	3	0
Warren	4	2	14	2	0
Allen	4	2	4	2	0
Johnson-Magoffin	3	3	25	0	0
Lawrence-Johnson	2	2	9	0	0
Floyd	2	0	0	0	2
Cumberland-Monroe	1	1	25	0	0
Elliott	1	0	0	1	0
Wayne	1	1	25	0	0
Lee-Owsley	1	0	0	1	0
Simpson	1	0	0	1	0
Clay, Tennessee	2	1	20	1	0
Total	36	23	290	11	2
Last week	37	30	399	7	0
Difference	1	7	109	4	2

Western Division

Recent price cuts in the western division have served to slacken operation, especially in Warren, Allen, Hancock, Ohio, and Daviess counties, where the oil is purchased according to its gravity. Operations in Barren, Cumberland and Monroe counties, where the Somerset prices prevail are still going forward due to the fact that a mild wildcat boom is in vogue.

Recent wildcat and semi-wildcat completions have stimulated development work in Barren County and the producers who have drilled up their proven territory are blocking acreage far in advance of production. The Wood Oil Co. is starting a test 3 miles north of Glasgow near the Stone Quarry. It is between the gas well on the Duff place and the Hall Baker Pool. The Tyler Oil Co. is drilling a rank wildcat 14 miles out of Glasgow on the Tompkinsville Pike; Prindle and associates have a location on the Thomas Furlong 10 miles southeast of Glasgow. If any of these tests prove productive it will mean much work in the future in Barren County.

The Preston well of the Emery interests, which came in last week making 72 bbls., the first pumping from the deep pay below the shale, is the best completion ever reported from Barren County. It is also an important one for it extended the Gorby Pool 1,500 feet south and west.

In the Beaver Creek Pool, north of the Hall Baker, the Wood Oil Co. reports a 15-bbl. pumper in its No. 4 Houck Brothers at 500 feet, about 110 feet below the black shale. In this same pool the Consolidated Gas Co.'s No. 7 Depp, the discovery lease, is a 5-bbl. pumper at the same depth.

The Star Oil Co. finished its No. 36 Ritchie, in the Emery-Moore Pool for 12 bbls. at 591 fet, 185 feet below the shale; Ziegler Brothers' No. 10 Taylor Mansfield is estimated at 6 bbls. at 494 feet after the sand was shot with 40 quarts of nitro; the Kopel Oil Co.'s No. 7 B. Neeley tested 10 bbls. on jack at 423 feet, where 8 feet of pay was shot with 30 quarts.

The Keyes Oil Corp.'s No. 1 Jump, near the city limits of Glasgow is pumping 5 bbls. at 552 feet and Whitlock's No. 1 Richards, at the Fish Hatchery, is doing 8 bbls. at 140 feet under the shale. No. 2 Jump and No. 2 Richards are being started.

Drilling Activities

Star Oil Co.'s Nos. 35 and 37 Ritchie, drilling at 400 and 480 feet, respectively; No. 6 Free, drilling at 150 feet; F. C. Moore's No. 5 Bruton, drilling at 500 feet; Ziegler Brothers' Nos. 11, 12 and 13 Taylor Mansfield, at 502, 100 and 40 feet, respectively; Wood Oil Co.'s No. 4 Redman, 200 feet; Houck Brothers' No. 5, spudding; John Church's No. 8, 200 feet; Harvey No. 1, rigging up; Harrington & Norris' No. 10 Evans, spudding; No. 3 Hucherson, rigging up; Maddox heirs, pumping water; Consolidated Gas Co.'s No. 8 Depp, spudding; No. 4 Turner, pumping water; J. L. Emery, Jr., & Sons' No. 2 Preston, drilling at 110 feet; No. 4 Depp & Greer, which has been producing amber oil for the past five months, is being drilled to the deep pay. No. 16 Depp & Greer is down 375 feet; Porter and others' No. 6 McLaughlin is being cleaned out after shot; Esslinger Oil Co.s No. 7 Jones, drilling at 356 feet or just through the black shale, found considerable salt water at 140 feet which is unusual in the Coral Hill section; Smith & Sons No. 18 Nichols, drilling at 250 feet.

Owensboro Field

Outside of the Swope well of the Pennsylvania-Indiana Oil Syndicate and the two dry holes mentioned in the first part of this report, nothing of interest transpired during the week in the Owensboro Field, comprised of Hancock, Ohio and Daviess Counties. However, the White Plains Oil & Gas Co. finished its initial venture in this area on the H. S. McBrayer farm, in the Pellville area, for an 8-bbl. pumper on the Barlow sand. This concern, which is one of the largest producers of crude oil in the western part of the State, is controlled by Snowden Brothers.

In the Swope area, the Chicago Petroleum Syndicate, got a dry one on No. 2 Ira Crowe in the Barlow sand. No. 1 was a big producer from the same formation.

In the vicinity of Collier Station, the Leeper Oil Co. got a 2-bbl. pumper in its No. 1 James Johnson from the shallow Jett sand.

Wells Progressing

Leonard and others are moving a rig to the James Miller farm at Dermott on the Leitchfield Road; C. E. Daugherty's No. 1 Ira Crowe, drilling at 100 feet; Wood Oil Co.'s No. 1 C. D. Swizer, north of Walnut Grove schoolhouse was spudding; No. 1 Tyler was plugged; I. N. Harkless' No. 1 J. S. Huff has resumed drilling after being shut down sometime with engine trouble; Pennsylvania-Indiana Oil Syndicate's No. 7 Abe Howe, is being cleaned out; White & Nicklin's No. 5 O. T. Burdette, drilling at 250 feet; C. A. Leeper's No. 3 J. S. Colyer, drilling at 350 feet; No. 4 H. D.

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Fields of the Central West

By Whit

FINDLAY, Ohio, Sept. 7.—The week in review shows no heavy decline in new work completed, as the Lima Field maintains its work to a good extent, having 20 completions for the past several days, while the other divisions, such as Central Ohio, Indiana and Illinois, do not number many.

The completions north of the Ohio River portion of the Central West Field for the week were as follows:

Field—	Wells Comp.	Oil Wells	Prod.	Dry	Gas
Lima	20	15	263	3	2
Central Ohio	4	1	10	1	2
Indiana	7	6	152	1	0
Illinois	1	1	55	0	0
Total	32	23	480	5	4

Lima Field

It looks as though much territory was overlooked in the past years in the Findlay section of the Lima Field, in parts of Hancock County. Just a short time ago the Base Line Oil Co. landed a 100-bbl. flush well on the Latschaw farm, in Liberty Township, Hancock County, within the defined limits, and now comes another well of more than minor importance also in the old area. This new well was Henry Bushey's No. 3, located 950 feet from the north line and 150 feet from the east line of the Nathan Taylor farm, in the northeast quarter of Section 25, Allen Township, near Mortimer, 3 miles north of Findlay, just west of the Toledo-Columbus branch of the Toledo & Ohio Central Railroad and south of the Nickle Plate Railroad. The well did 65 bbls. flush from the Trenton Rock and is on what is known as the "Sucker-Rod or Hog's Back" anticline that runs from east of Findlay northward through the north part of Hancock County, through Wood County, and thence through western Lucas County. This was in the old-time famous gas belt. The new well is only about 3 miles from the famous McMurray gusher that has always been considered the largest flush producer ever opened up in the Trenton area.

About midway between Findlay and Bluffton, in Section 1, Union Township, Hancock County, Ewing & Montgomery's No. 11 well, 600 feet from the north line and 200 feet from the east line of the Henry Deeds farm, produced a flush of 25 bbls.

In Bath Township, Allen County, northeast of Lima, C. A. Peavey and others' test 300 feet from the south line and 900 feet from the east line of the H. S. Vore farm, in the northwest quarter of Section 12, is credited with 25 bbls. Sand was found at 1,317 feet and drilled to a total depth of 1,341 feet, or 24 feet in the Trenton. In American Township, formerly known as German Township, and northwest of Lima, Mack P. Colt's No. 9 well, 300 feet from the south line and 750 feet from the west line of the S. R. Jacobs farm, Section 7, pumped 10 bbls.

In Jackson Township, in the southwestern part of Auglaize County, Schrack and others drilled a duster in the northeast corner of the C. Luthman farm, in

(Continued on Page 134)

Fires like this one cannot start when your tanks are equipped with the Wiggins Floating Roof

Your refinery, will it avoid a fire this year?

Your oil, will it be sold or burned? Pay you a profit or show a loss?

There is just one way to insure that your tanks will not be ignited by lightning, sparks or some similar cause.

That is by the installation of a Wiggins Floating Roof.

Blankets the Oil

This roof floats—actually floats—on the surface of the oil. Therefore, the oil cannot evaporate, and there is no accumulation of gas between oil and roof waiting for the merest touch of fire or extreme heat to flash into destructive action.

The Wiggins Roof *blankets* the oil—and does it *before* the fire starts, not afterward.

Fire Tests Proved Safety

The fire tests we conducted some time ago showed conclusively that it would be practically impossible for lightning to ignite the oil under a Wiggins Roof. Note that in the accompanying pictures gasoline is being burned on top of the roof without igniting the gasoline upon which the roof is floating.

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The performance of the roof under severe service conditions has shown its reliability. Snow, sleet, ice and rain have failed to halt the operation of the roofs in service.

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Don't allow your wooden roofs to continue to waste your light and most valuable fractions. Replace them this season. Wire our nearest office for the latest quotations on the diameters you contemplate.

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The Wiggins Floating Roof Keeps Oil In-Keeps Fire Out *and prevents corrosion under the roof*

Pennsylvania-West Virginia

By D. S. Wakenight

E. H. Everett Co. swabs 160 bbls. from Licking County well and has another 82 bbls. Preston Oil Co.'s Hocking County well flows 100 bbls. and Murray Oil & Gas Co. gets 95-bbl. completion. Hope Natural Gas Co. abandons deep test near Terra Alta, West Virginia. Pure Oil Co. has two 25-bbl. wells.

PITTSBURGH, Pa., Sept. 7.—The southeastern Ohio fields completed more than the usual number of good producers, all located in the deep sand territory. In Lot 5, Hanover Township, Licking County, the Edward H. Everett Co. has completed and shot in the Clinton sand, No. 4 on the Felix Montgomery farm. By swabbing they recovered 160 bbls. the ensuing 24 hours. In Section 25, Hopewell Township, the Carter Oil Co. completed and shot in the same formation a test on the G. W. Gutridge farm. The well flowed 15 bbls. the first 24 hours and has a gas pressure estimated at 500,000 feet. It is three-fourths of a mile west of the same company's test on the B. U. Hupp farm.

In Rush Creek Township, Fairfield County, the Ohio Fuel Supply Co. has completed in the Clinton sand a test on the E. L. McCandlish farm. It is a duster. In the northeast quarter of Section 13, Pike Township, Coshocton County, the Carter Oil Co.'s test on the Clyde Blair farm, 1,000 feet south of the test on the Gardner farm, is good for 15 bbls. a day in the Clinton sand. The Pure Oil Co. has completed through the Clinton sand a test on the Edward Ashcraft farm in Section 3, Jackson Township, Muskingum County, and good for 15 bbls. a day.

In Newton Township, Licking County, I. J. Denbow & Co. have a light pumper in the Berea grit at No. 5 on the Garey Weiss farm. In Pike Township, Coshocton County, the Pure Oil Co. is hauling rig timbers to a location on the W. H. Ashcraft farm. In Section 4, Jackson Township, Muskingum County, the same company is building the rig for No. 4 on the Jacob Ashcraft farm. Spindler, Donalson & Co. are drilling No. 4 on the Wolford farm.

Fair Producer in Hocking

In the southeast quarter of Section 12, Washington Township, Hocking County, Ohio, the Preston Oil Co. has drilled through the Clinton sand a second test on the W. H. and Gertrude Rauber farm. The well flowed 100 bbls. the first 24 hours. The location is 900 feet northwest of the same company's test on the W. W. Marks farm. Located 2,000 feet west of its first test on the B. F. Uhl farm, in Section 15, Monroe Township, Holmes County, the Ohio Fuel Oil Co. has completed its No. 4 on the same farm. It is a gasser in the Clinton sand good for 1,500,000 feet. In Section 17, Prairie Township, the Pure Oil Co. has completed in the Clinton sand a second test on the Hiram Marquis farm. It is a gasser good for 2,000,000 feet, and the location is 2,000 feet east of the first test on this farm.

In Lot 15, Hanover Township, Licking County, the Edward H. Everett Co. has completed and shot in the Clinton sand, No. 3 on the U. G. Porter farm. The well flowed 82 bbls. the first 24 hours. In section 10, Hardy Township, Holmes County, Klice, Echstein & McCann have completed a test on the A. M. Hudnut farm and showing for a 5 or 10-bbl. pumper in the Clinton sand. The location is 1,200 feet east of the East Ohio Gas Co.'s second test on the James R. Forgy farm.

In Section 13, Knox Township, Guernsey County, the Ohio Fuel Gas Co.'s test on the W. H. Hutchinson farm is a gasser good for 1,000,000 feet. In Independence Township, Washington County, the Forest Oil & Gas Co. drilled No. 5 on the Samuel Edwards farm from the salt sand to the Big Lime formation and good for 5 bbls. a day. In the same township, Harris & Co. are due in the sand at No. 3 William Yost farm. In Section 29, Ward Township, Hocking County, the Sunday Creek Coal Co. has completed in the Clinton sand its No. 128 on its own property and not good for more than 5 bbls. a day. The location is 1,000 feet south of No. 114. In Section 4, Clay Township, Knox County, W. T. Carson and others completed in the Berea grit a second test on the W. T. Carson farm, and not good for more than 2 bbls. a day.

In Lot 14, Madison Township, Licking County, Alvin C. Spindler & Co. drilled No. 4 on the James McGonagle farm through the same formation, good for 3 bbls. a day. In the southeast quarter of Section 29, Falls Gore Township, Hocking County, the Webb Oil & Gas Co. has a duster in the Clinton sand at a test on the Webb heirs' farm. This location is 2,000 feet south of the Cube Oil Co.'s second test on the J. E. Terrell farm. In Section 12, Reading Township, Perry County, the Carter Oil Co. has a 2-bbl. pumper at a test on the T. J. Vansickle farm. The same company is due in the Clinton sand at a second test on the D. Kochensparger farm.

Late Completions

The rounding out of the week of development work brought nothing better than light pumpers. In Newton Township, Licking County, Ohio, F. M. Rugg & Co.'s Nos. 8 and 9 on the Jacob Weiss farm are good for 4 and 3 bbls., respectively. In the same township, E. J. Edmonds and others have a 6-bbl. pumper in the Berea grit at a test on the Alexander Forey farm. In Franklin Township, the Detex Oil Co. and others have a light pumper at No. 3 on the Otto Franks farm. In the same township, W. W. and A. T. Wehrle have a 2-bbl. pumper in the Berea grit at a second test on the Smith-Wareham farm. The same parties have a gasser at a second test on the Rose Grove farm. In Licking Township, W. W. and A. T. Wehrle are down 2,600 feet at their Trenton Rock test on the Gut McDonald farm. In Rush Creek Township, Fairfield County, the Ohio Fuel Supply Co. at a test on the George W. Groff farm, found 20 feet of Clinton sand, but no oil or gas. In the same township, the Cooperative Oil Co. has abandoned its location for a test on the Ralph Miller farm.

Morgan County

In Malta Township, Morgan County, A. T. Smith's test on the Jennie Kimble farm is a very light pumper. The second test on the same farm is a 2-bbl. pumper. In Union Township, J. B. Keller & Co. have the same kind of a pumper at No. 16 on the John Donoho farm. In Penn Township, the Nugget Oil Co.'s Nos. 1, 2 and 3 on the Pearl Donelson farm are all very light pumpers. In Marion Township, W. R. Metcalf & Co.'s No. 4 on the Louisa Worthington farm is a light pumper in the Cow Run sand. Dunn & Burns have a 3-bbl. pumper at No. 18 on the Lovell farm.

Athens County shows a little increase in operations. In Lot 80, Athens Township, Gross & Frebault have a 10-bbl. pumper at No. 3 on the Daniel Higgings farm. The Pure Oil Co.'s No. 3 on the Louisa Gadnai farm is a gasser in the Berea grit. In Alexander Township, the Stewart Oil & Gas Co.'s test on the W. Louther farm is a duster in the same formation. In Athens Township, Bickle and others have completed a gasser on the G. C. Lawson farm. In addition to these completions there are five test wells drilling for production in the Berea grit.

In Section 6, Ward Township, Hocking County, the Murray City Oil & Gas Co. completed and shot in the Clinton sand, No. 6 on the Mackey heirs' farm. The well produced 95 bbls. the first 24 hours. This well is one location south of the first test on this farm. In Section 33, Hardy Township, Holmes County, the Pure Oil Co.'s test on the S. S. Trover farm, formerly a gasser, is now showing for a 5 or 10-bbl. pumper in the Clinton sand. The location is 1,000 feet north of production. In Section 31, same township, the East Ohio Gas Co. completed a test on the Edwin Snyder farm. Only a light show of oil was developed in the Clinton sand and it will probably be pulled out and abandoned. In Falls Gore Township, Hocking County, J. J. Walters & Co. drilled a second test on the Ohio Fuel Co.'s property through the Clinton sand, good for 25 bbls. a day after shot. The location is northeast of production.

Shallow Sand Completions

In Section 2, Franklin Township, Licking County, Moore & Adams completed in the Berea grit, No. 15 on the T. L. Stevens farm. It is a gasser. In Lot 15, Madison Township, the A. H. Heisey Co. had the same luck at a second test on the O. Bowers farm. In Section 36, Jefferson Township, Noble County, Joseph Estadt & Co. drilled No. 4 on the D. W. Williams farm through the stray sand, good for 5 bbls. a day. In the northeast quarter of Section 33, Enoch Township, Noble County, Way Wickens & Co. completed a test on the Henry Estadt farm, and dry in the same formation. In the northeast quarter of Section 36, Center Township, J. H. Yerain and others completed No. 6 on the R. E. Merry farm. It is a duster in the Buell Run sand.

Starting New Work

In Section 21, Madison Township, Perry County, the Atha Oil Co. has the rig completed for No. 12 on the Melick Brothers' farm. In Section 4, same township, the Iron Mountain Oil Co. has the rig completed for a test on the H. L. Durst farm, one-half mile southeast of the same company's test on the Adrey farm. In the northeast quarter of Section 32, Falls Gore Township, Hocking County, the Carter Oil Co. has spudded in a test on the Clinton Webb farm, one location north of the Mid-West Oil & Gas Co.'s test on the J. W. Geiger farm.

In Section 14, Washington Township, Hocking County, the Gordon Oil Co. started to drill another test on the W. L. Wagner farm. In Newport Township, Washington County, Charles Dailey and others started to drill on the O. O. Newlon farm. In Knox Township, Guernsey County, the Ohio Fuel Gas Co. is getting active. Its test on the W. R. Williams farm is drilling at 2,700 feet. The test on the Leona Clark farm is down 2,000 feet. A location has been made on the Robert Nelson, Jr., farm. The rig for a test on the W. H. Dyer farm has been completed. The rig on the H. L. Long farm is up, and a test on the James Glen farm started to drill. Local parties are drilling at 1,100 feet on the Earle Haney farm, and the Eastern Carbon Black Co. is down 2,000 feet at a test on the Charles Burris farm. The Logan Gas Co. is drilling at the same depth on the W. B. Oliver farm.

West Virginia

The West Virginia fields reported light wells. In Grant district, Pleasants County, the Faith Oil Co. completed in the Big Injun sand, No. 3 on the Hammett heirs' farm, good for 10 bbls. a day. In Grant district, Ritchie County, the Ferrell Farm Oil Co.'s test on the A. L. Parson farm is through the Squaw sand and abandoned. In Glenville district, Gilmer County, the Pittsburgh & West Virginia Gas Co.'s test on the Peter Messenger farm is a gasser in the Big Injun sand.

In Grant district, Ritchie County, the Big Four Oil Co.'s test on the Bowie heirs' farm is a gasser in the Mexon sand. In Lafayette district, Pleasants County, the Creek Oil Co.'s No. 21 on the Samantha B. McLaughlin farm is showing a little oil in the Cow Run sand. The well will be used for air.

Deep Test Abandoned

Near Terra Alta, Portland district, Preston County, the Hope Natural Gas Co. has abandoned what was to have been a deep test on the Joseph Gordon farm. This deep test was started almost two years ago and drilling delayed many times on account of trouble, caves, crooked and flat holes and lost tools. At a total depth of 4,900 feet the tools were again lost. A fruitless fishing job ensued and they were abandoned in the hole.

When this well was started the Hope Company intended to drill, barring accidents, to a greater depth than any other well. All arrangements had been made when the rig was built and machinery installed to drill possibly to a depth of 10,000 feet, unless oil or gas was found in commercial quantities in some formation before reaching the depth named. It is the deepest well ever drilled in Preston County.

Reserve Gas Co. Making Progress

In Union district, Harrison County, the Reserve Gas Co. is making satisfactory progress at its deep test on the Chapman Smith farm, having now reached a depth of 6,500 feet. This well was started a year after the Terra Alta well and has encountered very little trouble. It will be drilled to a greater depth than any other well unless accidents intervene.

For the first time in many months Calhoun County has completed better than a light pumper. It is the Hope Construction & Refining Co.'s second test on the R. A. Bourn farm, on Sycamore Creek, in Sherman district. The well is a natural producer good for 30 bbls. a day in the salt sand. The location is 1,000 feet northeast of the first test on this farm.

Mingo County

On the waters of Breeden Creek, Harvey district, Mingo County, the Public Gas Corp. has completed and shot in the Big Injun sand, No. 5 on the Neighbert heirs' farm. It is swabbing 13 bbls. a day from this formation. Seven miles southeast of Huntington, Jack Dalton and others have drilled a test on the Ira Barbour farm 1,200 feet below the Berea grit and dry in all formations. It has been abandoned. On Mud River, Barboursville district, Cabell County, 2 miles east of Barboursville, Grant Shipe and others completed and shot in in the Berea grit a test on the R. J. Armstrong farm. It is a gasser good for 1,000,000 feet.

In Union district, Pleasants County, the Mononaghela Oil Co. is moving a drilling machine to location No. 14 on

(Continued on Page 116)

Add these figures together if you want proof of Titusville BOILER fuel economy

H. W. Aarnes of Hude & Aarnes—Drilling Contractors, is responsible for these figures on the daily fuel consumption of one of their 60 H. P. Titusville Boilers. They tell a remarkable story of fuel economy and boiler satisfaction:

Hude & Aarnes—Brown No. 3 Sec. 13 T-15 R-20. Tearing Down—rigging up and making 2,090 ft. hole.

Rig No. 3—Burned 226 bbls.

ATKINS No. 4

Rig No. 1—Burned 245 bbls.—2,088 ft. hole.

BROWN No. 4

Rig No. 1—Burned 335 bbls.—2,139 ft. hole. Made two tests—pulled liner and reset.

ATKINS No. 2

Rig No. 3—Burned 356 bbls.—2,172 ft. hole. Set up new rig, had two fishing jobs.

ATKINS No. 3

Rig No. 1—Burned 251 bbls.—2,082 ft. hole.

The TITUSVILLE IRON WORKS Co.
TITUSVILLE ~ PENNA.

TITUSVILLE EQUIPMENT

Oil Country Boilers
Steam Drilling Engines
Tico Gas Engines
Flapper Valve Pumps
Pumping Powers
Twin Drilling Engines
Rotary Machines Rotary Drawworks
Swivels Slush Pumps
Crown Blocks
Traveling Blocks
Rotary Drilling Specialties

TITUSVILLE OIL COUNTRY MACHINERY

RUGGED ~ ENDURING

AFFILIATED COMPANIES FOR DISTRIBUTION

For Mid-Continent, Eastern, Western and Coastal Fields:
The Continental Supply Co.

For California:
The Republic Supply Company of California

For Export:
The Continental Well Supply Company,
No. 2 Rector Street,
N. Y. City

Oklahoma Field Operations

By J. L. Dwyer

Crude oil being taken from storage in Oklahoma. Operators hope to curtail drilling in Garber Field. Roxana well in that field makes 10,000 bbls. daily without deeper drilling. Hubbard Pool in Kay County may be scene of activity following discovery of another deeper producing sand.

History has been made in the past two weeks. This is the first time in the annals of the industry that the price of crude has been reduced while any appreciable quantity is being removed from storage. With one cut already established, and another one expected, the oil producers of Oklahoma can fold their hands and disclaim any responsibility for the unfavorable situation. It is not of their making. There is no overproduction in their territory and the daily production of the State, averaging around 460,000 bbls., has been surpassed by 40,000 bbls. since 1925 has started. Of greater importance than this is the potential production of the State. Slowly but surely the fields where the present intensive development is under way have failed. The fields that have offered a menace to the stability of the market are not yielding the huge production that was anticipated. The Garber Field in Garfield County is coming nearer than any field to complete wells of the type that upset markets, but consensus of opinion establishes it as a field with a very limited area.

The estimated cost of wells completed to the 4,300-foot Wilcox sand at Garber is $70,000 and many of the companies are heartily sick of their operations in that field. It will take many a barrel of oil to replace the cost of those wells, and owing to the appearance of water in the field and the disappointing showing of many of the deep sand wells, there is a movement on foot to curtail drilling and have each company shut down all of its deep sand wells excepting one on each lease. The Marland Oil Co., the Mid-Continent Petroleum Corp., and the Sinclair Oil & Gas Co. are said to be willing to enter into this agreement, but it is understood that the Roxana Petroleum Corp. objects.

A meeting of the officials of these companies is scheduled for the latter part of the week at which time they hope to work out some plan that will be of mutual benefit.

In the Garber Field the present drilling operations of the Sinclair Oil & Gas Co. call for an expenditure of $2,225,000.

Other Disappointments

The Thomas Pool northwest of Tonkawa in Kay County, the Holdenville Pool and the Yeager Pool in Hughes County, and several other spots that were watched with interest, have followed each other into the class of disappointments, and have done nothing to change the daily production of the State. With the lone exception of the Thomas Pool they have all gone to a watery grave, and with several of the Thomas wells nearing the 4,000-foot sand, the fate of that area should be decided this week.

The storage situation in the Burbank Field is of paramount interest, and the past week has witnessed 214,000 bbls. withdrawn from the tanks there. This leaves a total storage in Burbank of 8,964,300 bbls. The Sinclair Oil & Gas Co. for the past 60 days is said to have withdrawn 14,500 bbls. of crude a day from Burbank storage, and today finds Sinclair with 144,360 bbls. in storage in that field. At the present rate of withdrawal, September 15 should see its Burbank tanks empty. The Phillips Petroleum Co. and the Gypsy Oil Co., it is understood, have drawn the difference between the Sinclair withdrawals and the total withdrawals of the field. The Phillips Petroleum Co. is shipping oil on contract to the Vacuum Oil Co. The Gypsy Oil Co. has been drawing on Burbank storage since last June.

Prairie Storing Crude

In spite of the rather heavy withdrawals of crude the principal oil purchasing company in Oklahoma is storing oil. The Prairie Oil & Gas Co. is reported to be storing 30,000 bbls. of crude a day. During the time that this company was putting into storage an amount of oil about equivalent to its own daily production, it held the price of crude firm, but when it found itself buying oil from outside producers, and storing this oil, a reduction in the posted price was announced. There is no question that the Prairie Oil & Gas Co. attempted to maintain a steady price for Oklahoma crude.

In the Garber Field, the Roxana Petroleum Corp.'s No. 2-W Schroeder, NW cor. SW SW Section 18-22-3w, made a huge increase in production without deeper drilling. It jumped from 7,400 bbls. a day to 10,000 bbls. a day. This increase was just about offset by the decline of wells on the Marland Oil Co.-Mid-Continent Petroleum Corp.'s lease the SE quarter of Section 13-22-4w. The Roxana well is a quarter mile north and one location east of the Sinclair Oil & Gas Co.'s No. 25 Belveal NE cor. NE Section 24-22-4w, which was the discovery well in the Wilcox sand in this pool.

A list of the deep sand wells at Garber follows:

Roxana Petroleum Co.'s No. 1-W Schroeder, 6,459 bbls.

Roxana Petroleum Co.'s No. 2-W Schroeder, 9,979 bbls.

Marland Oil Co. and Mid-Continent Petroleum Corp.'s No. 41 school land, 6,129 bbls. and 2,500 bbls. water.

Marland Oil Co and Mid-Continent Petroleum Corp.'s No. 45 school land, 2,000 bbls.

Roxana Petroleum Corp.'s No. 1-W Wolfe, 1,101 bbls. and 21 bbls. water.

Healdton Oil & Gas Co.'s No. 29 Belveal, 335 bbls. and 75 bbls. water.

Carter Oil Co.'s No. 52 Dively, 60 bbls. 2,300 feet of water in hole.

Sinclair Oil & Gas Co.'s No. 25 Belveal, 2,065 bbls. and 75 bbls. water.

Sinclair Oil & Gas Co.'s No. 20 Kisner 150 bbls.

Sinclair Oil & Gas Co.'s No. 21 Kisner, 115 bbls.

Sinclair Oil & Gas Co.'s No. 22 Kisner, 211 bbls.

Sinclair Oil & Gas Co.'s No. 26 Denker, 430 bbls. and 150 bbls. water

Total production, 29,034 bbls.

Garber Making 35,000 Barrels

The total daily production of Garber is 35,000 bbls. In this territory, diamond core drilling is coming into prominence. The Mid-Continent Petroleum Corp. has purchased four diamond core drills and two of them will be operated in the territory around Garber. The core drill test of George Fahling and others SE cor. SE Section 14-24-3w, near the old Billings Pool has cemented the 4½-inch casing at 1,541 feet and from this point on down the formations will be cored.

The South Braman Pool in Kay County is second in interest to the Garber Field. The appearance of water in the discovery well in this pool, the Herbert Oil Co.'s No. 1 Community, was observed, with a great amount of concern. The geologists who are working in this region have definitely checked the level at which this water was found with the water level in wells that are supposed to be lower on the structure. The Herbert No. 1 has taken another startling drop from the daily production recorded last week. The production of the South Braman wells follows:

Comar Oil Co.'s No. 1 Bechtel, 5,592 bbls.

Comar Oil Co.'s No. 2 Bechtel, 3,283 bbls.

Comar Oil Co.'s No. 3 Bechtel, 15 bbls. and 40 bbls. water.

Comar Oil Co.'s No. 1 Horne, 2,676 bbls.

Comar Oil Co.'s No. 2 Horne, 2,051 bbls.

Comar Oil Co.'s No. 3 Horne, 21 bbls.

Comar Oil Co.'s No. 1 Johnson, 1,342 bbls.

Comar Oil Co.'s No. 1 McCullouch. 875 bbls.

Comar Oil Co.'s total production, 15,857 bbls.

Herbert Oil Co.'s No. 1 Community, 1,956 and 250 bbls. water.

Herbert Oil Co.'s No. 2 Community, 10 bbls.

Herbert Oil Co.'s No. 9 Community, 9 bbls.

Wentz Oil Corp.'s No. 1 Andrews, 375 bbls.

Shawver and others' No. 1 Townsite, 50 bbls.

Total South Braman production 18,257 bbls.

Thomas Pool Operations

The only well to be completed in the South Braman Pool last week was the Comar Oil Co's No. 1 McCullouch SW cor. SE Section 5-28-1w. This is a north offset to the Wentz Oil Corp.'s No. 1 Andrews. Sand in the Comar well was 2,395-2,400 feet and the well is flowing by heads every 15 minutes. The first day it averaged 45 bbls. an hour.

In the Thomas Pool, the Marland Oil Co.'s No. 1-A Thomas SW cor. SW Section 15-25-2w, is close to the sand. It is a quarter mile west of the No. 2 Thomas which was first to find the deep sand. The Prairie Oil & Gas Co. has spudded No. 1 McMullen SE cor. NE SE Section 20-25-2w. This is a mile west and three-quarters of a mile south of the Marland's Thomas well. The Twin State Oil Co. will try to plug off the water in its No. 2 Siler, the south offset to the Marland's Thomas well. In the Thomas Pool there are 31 wells drilling, and 12 are below 3,500 feet. Of the remainder of the drilling wells 9 are deeper than 3,000 feet. The tale should soon be told.

Deeper Sand at Hubbard

Just to add to the general excitement that is present in Kay County, the Hubbard Pool can offer some news. The discovery of the deeper sand in that region is of great importance and the performance of the wells in that sand is much better than the work of the wells in the upper sand. The Marland Oil Co.'s No. 3 Fitzgerald NE cor. SE NE Section 1-26-2w, found the deeper sand at 2,948 feet and swabbed 197 bbls. the first 24 hours. This sand will probably stimulate interest in the field.

The Tonkawa Field, far from being in the obituary column, has handed out some surprises recently. The Wilcox sand found there at 4,100 feet evidently has considerable productive area that has not yet been touched. With the completion of several good wells in this sand towards the north end of the field, the 6 miles between it and the newly-found Thomas Pool are getting a heavy play. While it is too much to expect the pools to connect, the geological departments of at least two oil companies are very hopeful of the intervening land. The Gypsy Oil Co., and the Carter Oil Co. are both well protected with acreage in this area. Most startling in the Tonkawa deep sand is the Comar Oil Co.'s No. 23 Beverlin which had quit flowing in the upper sand and was deepened to the Wilcox which it found at 4,240 feet. The well is not completed as yet, but it is producing over 3,000 bbls. a day and is the best deep sand well in Tonkawa today. The Comar Oil Co. has a truly wonderful lease in the Beverlin property. Since January of this year, the lease has produced 2,900,000 bbls. of pipe line oil.

The only bad news from the Tonkawa Field last week was the Wentz Oil Corp.'s No. 3 Mahoney NE cor SE Section 28-25-1w, a south offset to the deep sand well completed last spring by Louis Friedman and others. This well found the Wilcox sand at 4,227 feet and the hole filled up 500 feet with oil, but water showed at 4,240 feet. Some are inclined to believe that the water has backed up from the Friedman well on the north, and as the water is gradually exhausting, this theory may be correct. There are 10 wells drilling to the deep sand close by, and their completion will establish whether or not the Wilcox sand runs to the east of the Friedman well. The Wentz Oil Corp.'s No. 2 Mahoney SE cor. SE Section 28-25-1w, had the sand 4,222-65 feet with an initial production of 1,860 bbls. a day. No. 4 Mahoney SE cor. NE SE Section 28-25-1w, had the sand 4,225-65 feet with a daily production of 1,180 bbls. to start.

In the center of the old Ballantine gas field, McIntyre & Foster have a rig SE cor. NE, Section 29-27-1.

Pawnee County Producer

The south end of Pawnee County placed a good oil producing well on the map last week when the Gypsy Oil Co. and Selby Oil Co.'s No. 16 Mullendore, an old well drilled deeper, NW cor. NW Section 1-20-7 found the sand 2,823-79 feet and started flowing at the rate of 160 bbls. a day. A deeper pay was found 2,894-98 feet and the well filled a 100-bbl. tank in 20 minutes. At present it is flowing at the rate of 61 bbls. an hour.

In Payne County, the Shaffer Oil & Refining Co.'s No. 14 Laughlin NW cor. NE NE Section 2-18-5 which was completed two weeks ago with a production of 280 bbls., was drilled two feet deeper to a total depth of 3,385 feet and increased its production to 530 bbls. a day.

In the old Cromwell Field the only news of importance is that the Phillips Petroleum Co. will enlarge its gasoline plant from 11 to 17 units, and will lay a large size line to the Holdenville Pool in Section 35-8-8 where it has obtained gas contracts.

In the Yeager Poo, in Hughes County, the Dixie Oil Co., discoverers of the pool, have another well in No. 2 Diamond NE cor. SE NE Section 18-8-10 which made 276 bbls. the first 17 hours from sand 2,777-93 feet.

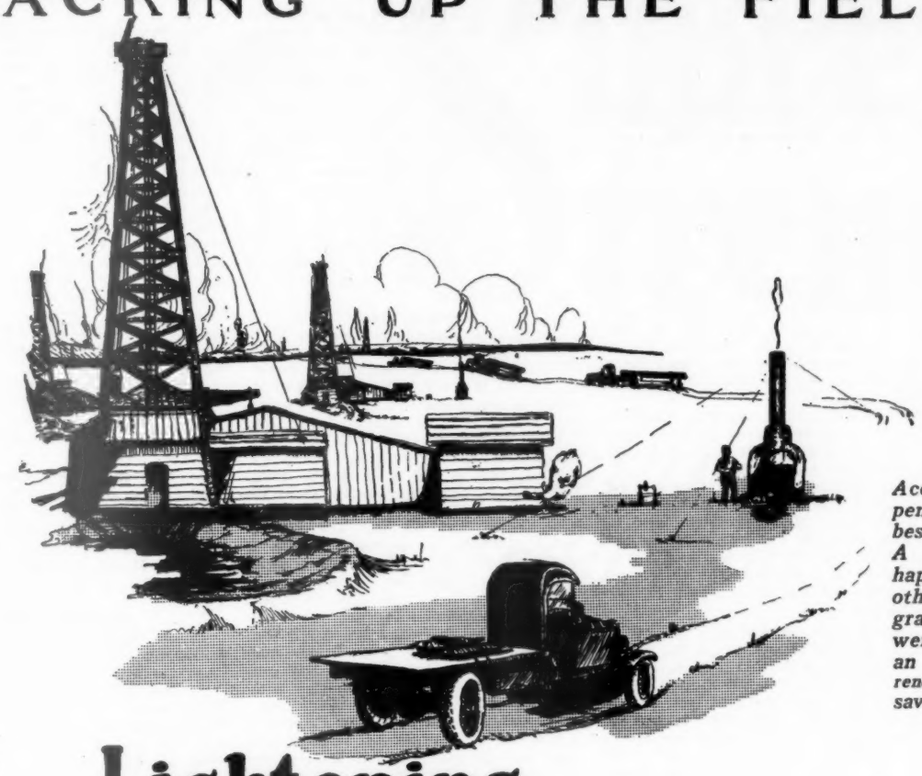
South of the Papoose Pool the well of the Fuhrman Petroleum Co. and Transcontinental Oil Co. No. 1 Harjo NE cor. NW SW Section 26-9-9 has a show of gas at 3,274 feet cable measurement. It is being cleaned out preparatory to drilling in the well. The Fuhrman Petroleum Co. has played this country heavily and should be rewarded for its activity.

A list by wells of some of the important fields in Oklahoma is given below. It shows the daily average production for the week ending Wednesday, September 2:

Wewoka

Company—	Wells	Prod.
Berry Pet. Co.	1	206
Boggs & Sykes	8	738
Dixie Oil Co.	13	1,956
Gypsy Oil Co.	2	130
Homaokla Oil Co.	3	76

BACKING UP THE FIELD PLAY



Accidents will happen in spite of the best "toolpushers." A little incident happened just the other day which was gratifying to us. We were able to answer an S.O.S. call and render a service that saved the day.

Lightening the "toolpushers" load

SLIP SOCKET WITH BOWL

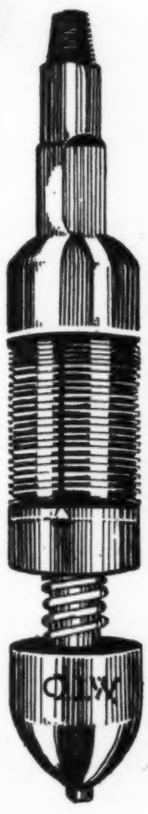
Size in.	Weight each
6⅝	200
8	340
10	490

Crash! Bang! Blooey! A cable has parted, the tools have gone into the hole and there is a fishing job on hand. The "toolpusher" rushes up to investigate.

That particular "toolpusher" knows it is time to get busy. The right kind of fishing tools and the quickest way of getting them on this location is his first thought. The next one is—INTERNATIONAL SUPPLY COMPANY, for we can furnish the necessary fishing tools to get them out of the holes, and furnish them P. D. Q.

He wires, he phones, or he gets into his car and goes right to trouble headquarters in the nearby town—you can bet there is a branch store there—and in a very short time, work has begun.

The "toolpusher" has a real friend — INTERNATIONAL SUPPLY COMPANY is always ready to come to his rescue.



INTERNATIONAL SUPPLY CO.
TULSA OKLA.

Independent Oil & Gas Co...	7	171
Lewis & Clark	1	65
Magnolia Pet. Co.	27	1,293
Champlin & Bass	2	436
Producers & Refiners	24	2,426
W. R. Ramsey	14	2,119
Roxana Pet. Co.	3	20
Shaffer Oil & Refining Co.....	7	868
Sinclair Oil & Gas Co.	1	6
Total	113	10,603

South Welcetka

Company—	Wells	Prod.
Magnolia Pet. Co.	6	281
Mid-Kansas Oil & Gas Co. ..	14	579
Tidal Osage Oil Co.	21	1,912
Total	41	2,772

Yeager Pool

Company—	Wells	Prod.
Carter Oil Co.	1	475
Dixie Oil Co.	4	430
Independent Oil & Gas Co. ...	2	294
Total	7	1,199

Holdenville Pool

Company—	Wells	Prod.
Independent Oil & Gas Co. ...	1	50
Gypsy Oil Co.	3	527
Roxana Petroleum Co.	1	0
J. W. McCullouch	2	326
Total	7	903

Cromwell

Company—	Wells	Prod.
Amerada Pet. Co.	10	479
Berry Pet. Co.	1	45
Burke-Greis	4	304
Carter Oil Co.	51	4,356
Carter Oil and Gardner Pet...	6	46
Central National Pet. Co.....	8	592
Continental Oil Co.	9	1,170
Empire Gas & Fuel Co.	3	180
Gilliland Oil Co.	8	141
Gypsy Oil Co.	53	3,963
Gypsy Oil and Laurel Co.....	9	804
Hoffer, T. B. et al	4	276
Houston Oil Co.	4	657
Independent Oil & Gas Co. ...	3	35
Kingwood Oil & Gas Co.	4	99
McMann Oil Co.	20	1,369
Mid-Kansas Oil & Gas Co. ..	4	79
Prairie Oil & Gas Co.	14	1,338
Pure Oil Co.	11	206
Roxana Pet. Co.	24	1,743
Shaffer Oil & Ref. Co.	8	312
Sinclair Oil & Gas Co.	24	2,229
Sinclair Oil & Gas and Gardner Pet. Co.	8	1,122
Sinclair Oil & Gas and Houston Oil Co.	4	457
Snowden & McSweeney	4	393
Southwestern Pet. Co.	20	2,003
Superior Oil Co.	6	115
Tidal Osage Oil Co.	13	2,183
H. F. Wilcox Oil & Gas	7	137
Waite Phillips Co.	18	882
White Eagle Oil & Ref. Co. ..	2	32
Devonian Oil Co.	1	164
Total	365	27,106

Burbank

Company—	Wells	Prod.
Carter Oil Co.	277	9,434
Comar Oil Co.	7	88
Devonian Oil Co.	106	1,591
Gypsy Oil Co.	194	2,751
Kewanee Oil & Gas Co.	25	297
Laurel Oil & Gas Co.	16	202
Lorraine Pet. Co.	15	92
Midland Oil Co.	37	771
Mid-Kansas Oil & Gas Co. ..	40	1,169
Peters & Oliphant	2	123
Phillips Pet. Co.	169	10,591
Phillips Pet. Co. and Delmar Oil Co.	16	1,100
Phillips Pet. Co.	178	3,269
Prairie Oil & Gas Co.	125	5,432
Producers and Refiners	29	316
Roxana Petroleum Co.	64	667
Simons and Moore	29	268
Sinclair Oil & Gas Co.	144	2,070
Skelly Oil Co.	24	832
Tidal-Osage Oil Co.	43	519
The Texas Co.	16	873
Twin State Oil Co.	24	602
Total	1 569	43.057

Kay County Extensions

Company—	Wells	Prod.
George Bole	3	267
Carter Oil Co.	11	1,027
Comar Oil Co.	19	1,186
Mid-Continent Pet. Co.	16	953
Gypsy Oil Co.	18	208
Laurel Oil & Ref. Co.	5	88
Mid-Kansas Oil & Gas	10	789
Phillips Pet. Co.	32	2,512
Prairie Oil & Gas Co.	4	155
Pure Oil Co.	5	250
Roxana Pet. Co.	8	244
Dye & Tomlinson	8	521
Skelly Oil Co. and Phillips Pet.	21	377
Sinclair Oil & Gas Co.	5	222
The Texas Co.	16	261
Twin State Oil Co.	16	1,014
Total	196	10.074

Burbank Production

The daily production of the Burbank Field are given below. These figures do not include the oil that is being drawn out of storage:

Gulf	2.863
Cosden	4.756
Osage	3.338
Oklahoma	17.328
Prairie	11.499
Kay County	2.979
Sinclair	2.292
Moore Ref.	327
Empire	771
Mid-Kansas	1.975
Twin State	1.538
Ozark	3.839
Texas	1.134
Total	54.599

Okmulgee District

North of Beggs, the Sheridan Oil Co. has a rig on the ground for No. 4, NW cor. SW Section 3-15-11. Shaffer Oil & Refining Co. has a rig on the ground for No. 8, C N half S half NE Section 17-15-11. Meridian Oil Co. has a machine in for No. 2, CNL SW NE Section 1-15-12. Phillips Petroleum Co. has a rig on the ground for No. 5, SE cor. NW NE Section 1-15-12. Olean Petroleum Co. has a rig up for No. 1 SE cor. NW NE Section 11-15-12. Hope Oil Co. has a machine on the ground for No. 4 NW cor. SW SE Section 22-15-13. The Frisco Oil Co. has spudded No. 1 CSL SE NW Section 25-15-13.

Near Eram. Hazlett and others are drilling at 450 feet with a machine in No. 1 CEL NW NW Section 7-13-15.

In Tiger Flats, the Independent Oil & Gas Co. is drilling at 800 feet in No. 1 NE cor. SE NE Section 14-12-11. Independent Oil & Gas Co.'s No. 1 NE cor. SE SW Section 15-12-11 is drilling at 2,626 feet. This is an old well being drilled deeper. Continental Oil Co. is building the rig for No. 6 CEL NE NW Section 20-12-12, and No. 3 CWL NW NE Section 20-12-12 is spudded.

Near Hoffman, McInturff and others have a machine on the ground for No. 2 CWL SW SE Section 20-12-14. Pulaski Oil Co. is rigging up No. 2 NE cor. NW NW Section 1-11-13. Magnolia Petroleum Co. has a rig on the ground for a twin well in No. 4-A SW cor. NE NW Section 1-11-13.

West of Henryetta, the Henry Oil Co. and the Amerada Petroleum Corp have a rig up for a twin well in No. 9-A CSL SE NW SW Section 24-11-11.

Near Morris, the Iron Mountain Oil Co. has a dry hole in No. 13 CEL NW SW Section 24-13-14 which will be plugged at 2,738 feet. Iron Mountain's No. 8 SE cor. SW NW Section 24-13-14 had sand at 1,956-58 feet with a total depth of 1,961 feet. It is making 75 bbls. natural.

Detrick and others have a rig on the ground west of Okmulgee for No. 2 NW cor. NE Section 7-13-11. J. A. Swindler's No. 3 CSL SW NE Section 25-13-11 had the sand 2,415-60 feet and is making 165 bbls. naturally. It may be drilled deeper. J. K. Leard and others are drilling at 1,250 feet in No. 1 NE cor. SE Section 14-12-11. Independent Oil & Gas Co. has completed another well on their lease in 33-12-11. It is No. 3 Carolina SW cor. SE SW of the section and the sand was found 3,705-16 feet. The well is good for 25 bbls. naturally. Independent Oil & Gas Co. has spudded No. 1 CNL NW SE Section 7-12-13.

Windsor Oil Co. has the rig up for No. 1 NW cor. NW Section 22-11-11. Schoenfelt and others have spudded No. 3 CEL NE SW Section 4-11-12.

Pulaski Oil Co. has spudded another well in the region where it has opened up new production. The new well is No. 2 CSL SW SE SE Section 36-12-13. Magnolia Petroleum Co. has completed No. 6 NW cor. NE NW Section 1-11-13, where the sand was found 2,810-50 feet and the well was shot with 20 quarts and is good for 430 bbls. Sturdwant and others have a dry hole in No. 1 NW cor. SW SE Section 1-11-13. Total depth is 1,830 feet, and the rig is up for a twin well No. 1-A.

North of Beggs

North of Beggs, Clover Brothers have spudded No. 6 SW cor. NW NW Section 3-15-11. Lowery & Mitchell have a duster in No. 3 CWL SW NW Section 4-15-11 which is abandoned at 2,125 feet. Beggs Oil & Gas Co. has completed No. 1-A CNL NW NW Section 10-15-11. Sand was 2,260-75 feet and the well is making 50 bbls. after a shot of 40 quarts. Phillips Petroleum Co.'s No. 3 CSL NW NE Section 1-15-12 is a 300-bbl. well natural in sand 2,067-85 feet. Independent Oil & Gas Co. has a failure in No. 1 C SW SE Section 14-15-12. The well is abandoned at 2,901 feet. Mid-Continent Petroleum Co. has a duster in No. 2 SE cor. NE SW Section 14-15-12 at a total depth of 2,646 feet; and No. 4 NE cor. NW SW Section 14-15-12 is dry and abandoned at 2,614 feet; No. 5 NW cor. SW Section 14-15-12 is completed with 5,000,000 feet of gas from sand 2,073-2,106 feet. Olean Petroleum Co.'s No. 6 NW cor. SE NW Section 14-15-12 was shot with 30 quarts and is making 300 bbls. from sand 2,602-12 feet. The Texas Co. is drilling at 500 feet in No. 1 CNL NW NW Section 17-15-12. Michaelson and others have spudded No. 1 NW cor. NW Section 29-15-12. Waite Phillips Co. has completed a small well in No. 2 NW cor. NE Section 6 14-12. The sand was found 2,762 67 feet and the well is good for 15 bbls. after a shot of 10 quarts.

The Devonian Oil Co. and Independent Oil & Gas Co. are drilling at 925 feet in No. 2 CEL SE SW Section 7-15-13. Southwestern Oil Fields Co.'s No. 2 NW cor. NE SE Section 35-15-12 had the top of the sand 1,698-1,700 feet with a show of gas and 1,200 feet of oil in the hole. It is drilling deeper. Ozark Drilling Co.'s No. 1-A SW cor. NW Section 2-15-14 had sand 1,536-47 feet and the well is completed for 5,000,000 feet of gas. Misener and others have spudded No. 7 CSL SW NW Section 11-15-14. Papoose Oil Co. has completed No. 20 CNL SE SW Section 21-15-14 in sand 2,196-2,203 feet. The well is making 450 bbls. naturally. Papoose Oil Co.'s No. 28 CNL SW SW Section 21-15-14 is spudded, as is No. 29 C NW SW Section 21-15-14.

Becker & Hutchinson are drilling at 450 feet in No. 3 NW cor. SE Section 4-14-13. Kewanee Oil Co.'s No. 9 CWL NE SW Section 22-14-14 is dry and abandoned at 2,465 feet.

Okfuskee County

The Bingman & Smith Oil Co.'s No. 1 SE cor. SE Section 16 13 8 was plugged back to sand found 2,400-34 feet and the well is being cleaned out. H. E. Clark and the Mountain Fork Oil Co. have spudded No. 1 NE cor. NW Section 1-13-9.

Seminole County

In the Wewoka Pool, the Prairie Oil & Gas Co.'s No. 2 NE cor. SW Section 31-8-8 is dry and abandoned at 4,138 feet; and No. 3 SW cor. NE Section 31-8-8 is dry and abandoned at 3,333 feet. W. R. Ramsey has completed No. 4 SE cor. SE Section 31-8-8 which had the sand at 3,223 34 feet and an initial production of 256 bbls. Magnolia Petroleum Co. has a rig on the ground for No. 3 SW cor. SW Section 32-8-8.

Near Maud, the Magnolia Petroleum Co. has completed a light well in No. 1 NW cor. SW SW Section 18-7-5. Sand was 3,803-07 feet with a total depth of 3,817 feet, and the well is making 25 bbls. oil and 500,000 feet of gas and is completed.

The Homa Okla Oil Co. has set the surface casing in No. 2 SE cor. NE NE Section 6-7-8. Independent Oil & Gas Co.'s No. 1 SW cor. NE Section 11-7-8 is dry and abandoned at 4,426 feet. Hoffer Oil Co. is preparing to skid the rig at 1,390 feet in No. 1 NW cor. SW NE Section 6 6-8.

Hughes County

Gibson & Zanhiser have spudded No. 2 NW cor. NE NE Section 4-9-11. The Mid-Kansas Oil Co.'s No. 1 NW cor. NW Section 10-9-11 had the sand 2,887-97 feet with a hole ful of oil. It is not completed.

West of the Holdenville Pool, the Prairie Oil & Gas Co. has abandoned No. 1 SE cor. NE SE Section 34 8-8 at 4,110 feet. Independent Oil & Gas Co.'s No. 2 SE cor. NW Section 35-8-8 had the top of the sand 3,244 feet with first oil at 3,267 feet and a total depth of 3,227 feet, and the well is making 4 bbls. an hour and 12,000,000 feet of gas. J. W. McCullough and others' No. 1 SE cor. NW NW Section 35-8 8 had the sand 3,197-3,239 feet with a total depth of 3,242 feet. The well is making 60,000,000 feet of gas and no oil. Roxana Petroleum Corp.'s No. 1 SE cor. SW NE Section 35-8 8 is completed for a gas well in sand 3,218-3,312 feet. It is making 60,000,000 feet of gas.

In the Yeager Pool, the Independent Oil & Gas Co.'s No. 2 NE cor. SE SE Section 18 8 10 had sand 3,082-3,139 feet with a total depth of 3,519 feet. The well had 4,000,000 feet of gas in the Gilcrease sand, and is completed. Independent Oil & Gas Co. and others' No. 1 SW cor. SE SE Section 18-8-10 is swabbing 200 bbls. from a total depth of 3,865 feet and is not completed. The Carter Oil Co.'s No. 2 NW cor. NE NE Section 19 8-10 is still flowing 400 bbls. from the sand found at 2,700 feet, and

(Continued on Page 123)

Kansas Oil Field News

By J. L. Dwyer

The old Winfield Pool in Cowley County is coming in for a lot of attention owing to the completion of the J. A. Hull Co.'s No. 1 Bartlow, SW cor. NW Section 19-32-5. This well, a half mile east of production, had 80 feet of the Burbank sand 2,980-3,060 feet with 2,000,000 feet of gas, and flowed 175 bbls. It was completed two weeks ago, but interest around it is just being aroused. The Waite Phillips Co. purchased the north half of the SE of Section 19-32-5 for $60 an acre and the Prairie Oil & Gas Co. is reported to have purchased the north half NE of Section 19-32-5 for the same price. There is some rumor that a well will be started on old location carried for a long time in the NW cor. NW Section 30-32-5.

For a company that has been sold, and intends to turn over its operations to other interests shortly, the Waite Phillips Co. is surprising everyone by continuing to purchase acreage. In Butler County this concern has recently made quite a few purchases of leases.

In the venerable El Dorado district, O. A. Boyle and others have a hole full of oil in No. 1, NE cor. SW SE Section 22-27-7. This is a wildcat well and had the sand 2,704-11 feet. It is being cleaned out and a liner is being run. The well is also held up for tanks and pipe line connections. It will be observed carefully and probably will give impetus to much drilling activity in the adjacent territory. The Phillips Petroleum Co. paid $30 per acre for the SE quarter of Secton 21-27-7, and the Greenland Oil Co. purchased the east half SE quarter of Secton 28-27-7 for $100 an acre.

The Sinclair Pipe Line Co. which has a 4-inch line from Eureka to the Sinclair, Browning lease in Section 20-22-10, Greenwood County, is now laying another line of the same size to the lease.

In Rainbow Bend with the daily production down to 9,025 bbls. the wells that are close to the sand should send this figure up to 14,000 bbls. before the next two weeks pass. The Waite Phillips Co. is adding three units to its Rainbow Bend gasoline plant giving that plant a daily capacity of 24,000 gallons.

An interesting occurence of the week is the decision of the T. B. Slick interests to drill out the lead plugs in No. 1 Buzzi, SW cor. NE Section 8-35-4. This well which was a disappointment in the Wilcox sand, will be drilled on down to the Turkey Mountain formation.

The Russel Pool, in Russell County is on the increase and the daily production for last week was 5,750 bb'ls.

In Clark County the Watchorn Oil & Gas Co. is drilling at 5,410 feet in No. 1 Morrison, SE cor. NE NE Section 20-33-21w. This well had 6,000,000 feet of gas in a sand found 5,318-32 feet.

Greenwood County

Empire Gas & Fuel Co. is fishing for a bailer at 640 feet in No. 3, SE cor. SW SE Section 24-23-8; No. 4, NE cor. SE SE Section 24-23-8, is drilling at 655 feet; No. 5, SE cor. NE SE Section 24-23-8, is drilling at 350 feet. Phillips Petroleum Co. and the Greenland Oil Co. have completed a big well in No. 1, NE cor. SW Section 25-23-8. Sand was 2,505-34 feet, and the hole filled up 2,100 feet with oil. The well was given a shot of 100 quarts and made 710 bbls. the first day after the shot. Mission Oil Co.'s No. 1, SE cor. NW Section 25-23-8, had the top of the sand 2,506 33 feet and made 15 bbls. an hour naturally. It

(Continued on Page 121)

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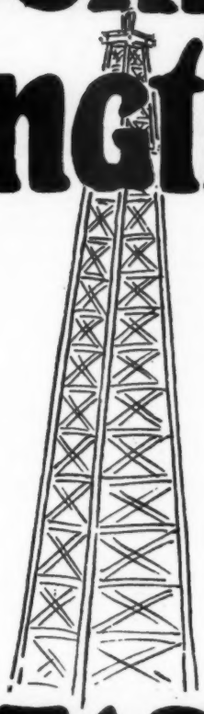

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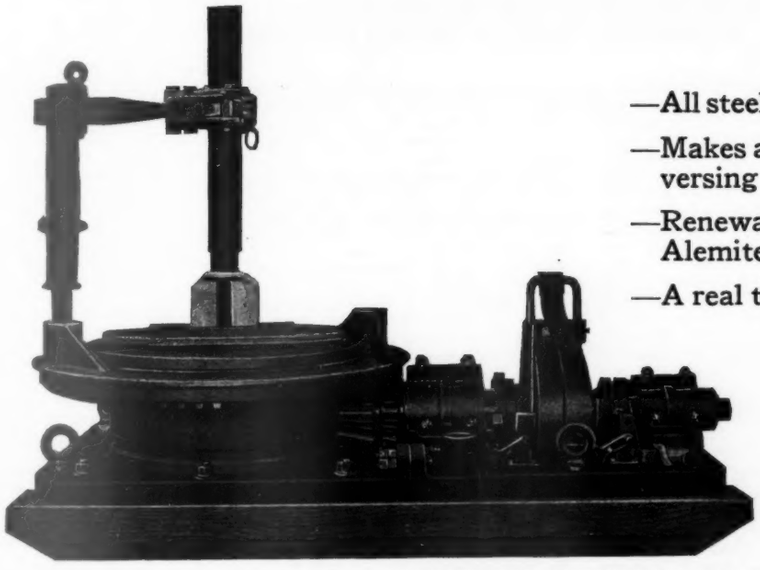

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North Louisiana-Arkansas

By M. L. Vaughn

Smaller and fewer wells in north section of Smackover Field, with more dry holes and salt water wells. Ohio Oil Co.'s No. 4 E. K. Smith, Pine Island district, Caddo Field, making 60,000,000 feet of gas. Interest turning from Smackover to East El Dorado in the Calion district. More tests at Urania.

SHREVEPORT, La., Sept. 7.—Production continues to drop in the heavy oil districts in Smackover, the daily decrease during the past week averaging 4,080 bbls. Slight declines in other districts in both Louisiana and Arkansas brought the daily decrease in production to 5,304 bbls. North Louisiana production averaged 48,190 bbls. a day, and Arkansas, 223,955 bbls. a day, a total of 272,145 bbls. distributed as follows:

North Louisiana	
Bellevue	2,820
Caddo, light	7,518
Caddo, heavy	2,126
Cotton Valley	12,085
De Soto and Red River	4,072
Elm Grove	530
Haynesville	12,675
Homer	6,365
Total	48,190
Arkansas	
Smackover, heavy	186,085
Smackover, light	25,810
El Dorado	8,805
Nevada County	1,465
Stephens	1,790
Total	223,955
Total both fields	272,145
Decrease	5,304

Another big gas well was completed in the deep sand in the Caddo Field last week when the Ohio Oil Co.'s No. 4 E. K. Smith came in with an initial volume of 60,000,000 feet. The well is located in Section 12-21-15, in the Pine Island district, and was completed at 3,690 feet. It is flowing through 6-inch casing and it required 21 men to get it under control. One deep gasser in this territory has been supplying several towns with gas for more than a year, being sent through the pipes with its own power.

Activity at Calion

Oil activity in southern Arkansas has been largely diverted from the Smackover district to the East El Dorado, or Calion, district, following the discovery of a new producing sand at around 2,800 feet. Many new wells have been started in the neighborhood of Jim Stock's 150-bbl. producer, the discovery well of the new sand, and arrangements are being made for the drilling of numerous wildcat tests ranging from 5 to 20 miles beyond the new production. A number of wildcat tests in the neighborhood which had been abandoned will be deepened.

Rowe & Wallace, who have been pumping from 90 to 100 bbls. a day from their well in La Salle Parish, the only recognized commercial well in the Urania district, are laying a pipe line from their tanks to the Missouri Pacific Railway at Urania, and will be ready to start shipping oil within the next week. A number of interesting tests will be made in this territory during the next few weeks and an intensive drilling campaign is expected as a result of the successful completion of the Rowe-Wallace well.

Completions

Union County, Arkansas

Completions in the Union County area of the Smackover Field during the past week numbered 13, with only 8 producing oil wells, their combined production amounting to 1,995 bbls., 3 gas wells with an initial volume of 70,000,000 feet and 2 failures, 1 in the Graves and 1 in the Blossom sand.

J. E. Crosbie completed Lawton A-5, Section 10-16-15, blowing with air at the rate of 1,000 bbls. a day, 85 per cent salt water, at 2,442 feet, and Lawton A-10, same section, making 40,000,000 feet of gas at 2,710 feet.

Gulf Refining Co. junked the hole in No. 10 J. H. Alphin, Section 10-16-15, and the well was abandoned at 2,539 feet. Number 40 Werner, Section 6-16-16, made a 75-bbl. pumper at 2,268 feet.

Hickman and others junked the hole at 2,340 feet in No. 9 Graves, Section 3-16-15, and the test was abandoned.

Humble Oil & Refining Co.'s Flenniken A-6, Section 3-16-15, is pumping 200 bbls. at 2,379 feet, 5 per cent salt water.

Ohio Oil Co.'s No. 11, Section 10-16-15, is making 20,000,000 feet of gas at 2,550 feet.

Ramsey and others completed No. 2 Rice, Section 7-16-16, pumping 50 bbls. at 2,300 feet.

Joyce Richardson's No. 3 Bradford, Section 8-16-15, made a 200-bbl. pumper at 2,387 feet.

Jim Stock completed No. 1 Polk & Ezell, Section 18-17-14, in the East El Dorado Field, flowing 150 bbls. at 2,869 feet, 10 per cent salt water.

The Texas Co. completed No. 3 Langley, Section 7-16-16, pumping 20 bbls., at 2,331 feet.

Ouachita County

Only nine producing oil wells were completed in the north end of the Smackover Field during the week, the most of them pumpers and having an aggregate initial production of 3,452 bbls. Two gas wells were completed in the deep sand, their combined volume adding 70,000,000 feet of dry gas per day to the output of the field and four wells were pronounced failures. A number of derricks and locations were abandoned as a result of the increased number of failures to get production in the districts in which they were located.

Gulf Refining Co.'s No. A-8 Goodwin, Section 5-16-15, is pumping 200 bbls. at 2,375 feet.

Humble Oil & Refining Co. completed No. 6 Farris, Section 34-15-15, making 30,000,000 feet of gas with a spray of oil at 2,581 feet; No. 3 R. Laney, Section 31-15-15, flowing 150 bbls. at 2,592 feet; and plugged and abandoned No. 1 Woods, Section 34-15-15, at 2,575 feet.

Imperial Oil & Gas Co.'s No. 10 McClanahan, Section 6-16-15, is pumping 400 bbls., 35 per cent b.s. at 2,384 feet.

Phillips Petroleum Co. completed No. 11 Joyce, Section 33-15-15, blowing 300 bbls with air, at 2,398 feet.

Pure Oil Co. junked and abandoned No. 5 Brister, Section 28-15-15, at 2,422 feet and J. D. Reynolds abandoned No. 1 Keller, Section 25-15-17, at 2,120 feet.

Roxana Petroleum Corp.'s No. A-1 Laney, Section 31-15-15, is pumping 120 bbls. at 2,571 feet.

T. P. Coal & Oil Co. completed No. 9 Laney, Section 31-15-15, flowing 600 bbls. at 2,580 feet.

The Texas Co.'s No. 10 Johnson, Section 3-16-15, is pumping 382 bbls., 5 per cent b.s., at 2,386 feet.

Wilson Petroleum Co. junked and abandoned No. 1 Goodwin, Section 5-16-15, at 1,980 feet.

Bossier Parish

J. S. McCullough trustee, completed No. 1, W. H. & C. B Hodges, Section 25-16-12, pumping 60 bbls. at 1,556 feet.

Wilder & Cushman completed No. 1 Leviston, Section 13-16-12, pumping 5 bbls. at 1,559 feet.

Woodley & Collins abandoned No. 1 Chamblee, Section 20-23-12, at 2,804 feet, 6 miles northeast of Plain Dealing.

Caddo Parish

Dixie Oil Co. completed No. 1 J. M. Hoss, Section 24-22-15, pumping 50 bbls. at 1,079 feet, in the Hosston district, and No. 67 Robertshaw, Section 14-21-15, was abandoned at 1,703 feet, in the Pine Island Field.

Ohio Oil Co. completed No. 17 E. K. Smith, Section 12-21-15, making 50,000,000 feet of dry gas at 3,696 feet, in the Pine Island district.

Roy and others completed No. 2 Hutchinson, Section 34-16-12, making 8,000,000 feet of gas at 1,920 feet in the Elm Grove district.

Three miles northwest of Greenwood the Shreveport Producing & Refining Co. completed No. 1 Bryson, Section 17-17-16, making 5,000,000 feet of gas at 1,988 feet.

Cotton Valley District

In the Cotton Valley district, Fortuna Oil Co. completed No. 2 Maynor, Section 34-23-10, making 30,000,000 feet of dry gas at 2,635 feet, and the Ohio Oil Co. completed No. 15 Gray, Section 26-21-10, pumping 100 bbls., 50 per cent water, at 2,569 feet.

Drilling Operations

Union County, Arkansas

Drilling activity in the Union County area of the Smackover Field has received a considerable impetus by the discovery of a deep producing sand in the East El Dorado Field, and a number of new wells have been started in this territory. Among them are Clement Oil Co.'s No. 4 Moody, Section 18-17-14, rigging up to drill, and Sam Cook's No. 1 Ezell, same section, a derrick; Norris and others' No. 1 Perdue, Section 4-17-14, a derrick, and the Ohio Oil Co.'s No. 1 Murphy, Section 24-17-15, a derrick; Jim Stock's No. B-2 Ezell, Section 18-17-14, a derrick, and Wingfield and others' No. 1 Tuffs, Section 18-17-14, a derrick. Clark and Greer are arranging to deepen No. 1 Roseboom, Section 7-17-14, from 2,145 feet, and Morgan and others will go back into No. 2 Polk-Ezell, Section 12-17-15, abandoned in 1924 at 2,880 feet. The new sand in Jim Stock's producing well was found at 2,859 feet.

In the old field, Amerada Petroleum Corp. is baling to test 14 feet of sand at 2,563 feet in No. 6 Calloway, Section 4-16-15, coring at 2,730 feet in No. 5 Giller, Section 15-16-15, and tested 8 feet of sand at 2,547 feet, drilled to 2,571 feet and is standing with 900 feet of oil in the hole and a little salt water. Arkansas Fuel Oil Co. has 1,000 feet of fluid in No. 7 Ferguson, Section 6-16-15, and arranging to pump, and is rigging up to drill No. 9 and No. 10 Ferguson in the same section. The deep test in No. 3 Spahr, Section 35-15-16, is drilling at 2,805 feet.

Nick Barbara's well on the Houston lease, in Section 12-16-15, blew in at 2,712 feet making 20,000,000 feet of gas and 3,000 bbls. of salt water, was plugged back to 2,708 feet and is arranging to lubricate. Bonderant and others are drilling at 1,750 feet in No. 1 Garner, Section 8-18-12, 10 miles east of the new production in the El Dorado East Field. Bristol and others tested salt water and have set casing at 2,572 feet in No. 1 Parkerson, Section 1-16-16.

J. W. Clark is drilling No. 3 Smith, Section 16-16-15, at 2,080 feet; Craw-

74 LAWTON SAND OIL WELLS SHOW LOW AVERAGE DAILY PRODUCTION

EL DORADO, Ark., Sept. 5.—Seventy-four oil wells have been completed in the Lawton sand and their total production at this time is 13,200 bbls., an average of 178 bbls. a day. The Lawton sand at no time has shown more than a 15,000-bbl. a day production. It has developed many gas wells and an ocean of salt water but as an oil producing zone it is becoming more of a disappointment with the passing of time. Of the 74 Lawton sand oil completions 15 are dead. Of the remaining 60 producing wells averaging 220 bbls. to the well, 14 are on the pump, and 46 are flowing naturally. Three wells are showing more than 75 per cent water. The Graves sand production today is estimated at 130,500 bbls. from 641 completed oil wells of which 140 are dead. Of the remaining 501 oil wells averaging 257 bbls. per day per well, 424 are on the pump and 59 are blowing with air or gas leaving only 18 flowing naturally.

A considerable number of wells that missed production in the Lawton and Blossom sands are drilling deeper.

Genter and others' No. 1 Freeman Smith, SE NW NW Section 24-15-15, Ouachit County, cored a sandy lime at 2,660 feet.

Colcord and others' No. 2-A Laney, NE SE SW Section 31-15-15, got Lawton sand at 2,573-76 feet and the well is flowing by heads 200 bbls. a day. The same operators' No. 3-A Laney, C SE SW Section 31-15-15, is a 25,000,000-foot gas producer at 2,560-61 feet. It had a showing of oil.

The Gulf Refining Co.'s No. 8 R. Bennett, CSL SE SW SW Section 33-15-15, was arranging to bail sand at 2,551-75 feet.

Duho and others' No. A-1 McKenzie, SE NW NE Section 36-15-15, is shut down at 3,150 feet.

Jones and others' No. 1 Wilson, NE SE NW Section 26-15-18, tested salt water with a small trace of oil and a show of gas in sand at 2,316-21 feet. The test will be deepened. It is 18 miles west of the Smackover heavy oil area.

The Sinclair Oil & Gas Co.'s No. A-7 Berry, SE NW NE Section 33-15-15, made a 400-bbl. well on air. It is producing from Graves sand at 2,420-45 feet. No. 14 Berry, SE NE NW Section 33, was being swabbed to test sand at 2,375-96 feet. No. 15 Berry, SW NW NE Section 33, is flowing 350 bbls. a day from sand at 2,375-95 feet.

The Sure Oil Co.'s No. 5 Joyce, NW SW NW Section 34-15-15 got Lawton sand at 2,560-74 feet and the well showed 25,000,000 feet of gas and 150 bbls. a day of oil.

The Standard Oil Co. of Louisiana's No. B-5 Umpstead, SE SE NW Section 32-15-15, was drilling at 2,737 feet. The same company's No. 6 Powell, NW NE NW Section 34-15-15 was coring at 2,617 feet. The same company's No. 18 Alphin, C south half SE NE Section 3-16-15, found a heavy flow of gas and salt water at 2,518 feet.

The Amerada Petroleum Corp.'s No. 6 Calloway, NE NW SE, Section 4-16-15 bailed dry on a re-test of sand at 2,549-60 feet, and was coring.

The Standard Oil Co. of Louisiana's

(Continued on Page 129)

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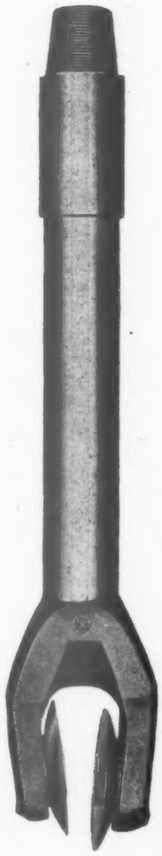

2977 feet of 11-in. hole in 6¼ days.

4 sets of discs made 2885 feet of hole.

1312 feet of hole made with **one** set of discs, without pulling drill stem.

Only 5 Round Trips made to drill this hole.

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ford & Sebastian are drilling No. 6 Giller, Section 14-16-15, at 2,625 feet, arranging to deepen No. 4 Graves, and set casing in No. 8, Section 3.16-15, at 2,517 feet. Daniels & Rowe have derrick up for No. A-1 Tatum, Section 7-16-15; Eason and others are drilling No. 6 Palmer, Section 9-16-15; W. H. Gilliland, drilling No. 2 Rice, Section 7-16-16, at 1,650 feet, and George & Jones, waiting orders in No. 5 Murphy, Section 18-16-15 at 2,560 feet. Gulf Refining Co. has ten rigs running in the Smackover territory.

In Deep Test

F. C. Henderson is down 2,810 feet in a deep test in No. 2 Smith, Section 18-16-15; Hickman and others, drilling No. 11 Graves, Section 3-16-15, at 2,490 feet; Higgins Oil & Fuel Co., coring at 2,280 feet in No. 4 McGraw, Section 7-16-16; Hollifield and others, arranging to deepen No. 12 Giller, Section 10-16-15, from 2,600 feet, and Humble Oil & Refining Co. has 500 feet of salt water with no oil at 2,380 feet in No. 4-B Goodwin, Section 3-16-15, and tested salt water at 2,683 feet in No. A-4 Lawton, Section 7-16-15.

Imperial Oil & Gas Co. tested 20,000,000 feet of gas at 2,585 feet in No. 8 Murphy, Section 9-16-15, and arranging to lubricate; bailing casing in No. 9 Murphy at 2,640 feet, and derrick up for No. 11 McClannahan, same section. E. M. Jones is testing 4 feet of sand at 2,740 feet in No. 4 Cook, Section 16-16-15, and has derrick up for No. 1 Lawton, Section 10-16-15; Kennebrew and others are drilling at 2,385 feet in No. 1 Williams, Section 3-16-15, and No. 4 Murphy, Section 9-16-15, is arranging to drill deeper from 2,465 feet. Laurel Oil & Gas Co. has seven rigs running in the deep sand district.

J. S. Lyell tested 15,000,000 feet of gas in 2 feet of sand in No. 7 Fee, Section 3-16-15, and is lubricating, and set 10-inch in No. 11, and No. 13, has derrick up for No. 12, same section. Magnolia Petroleum Co. is drilling at 3,340 feet in a deep test on the Chandler lease, Section 4-19-14, 5 miles east of production in the South El Dorado Field, set 8-inch at 2,470 feet in No. 6 Hatfield, Section 7-16-15, and 6-inch at 2,200 feet in No. 3 Stout Lumber Co., Section 1-16-17.

Natural Gas & Petroleum Co. is coring No. 4 Ballard, Section 15-16-15, at 2,575 feet; rigging up to drill No. 1 Holloway, Section 6-16-16, and set 8-inch at 2,403 feet in No. C-4 Murphy, Section 8-16-15.

Shut Down for Water

G. H. Pace is shut down for water at 1,410 feet in No. 1 Barnett, Section 11-16-15; Parrish and others have a fishing job at 2,200 feet in No. 3 Ferguson, Section 6-16-15; Penguin Oil Co. is drilling at 2,370 feet in No. 4 G. E. Murphy, and shut down for water at 1,910 feet in No. 5, Section 8-16-15; Phillips Petroleum Co. has three wells drilling to the Blossom sand, and the Pure Oil Co. has three in Section 6, 7 and 8-16-15. A. H. Ramage is drilling at 2,572 feet in No. C-9 Lawton, Section 10-16-15; Sam Richardson has a fishing job at 2,150 feet in No. 5 Lawton, Section 10-16-15, and the Riggs Drilling Co. is drilling at 2,325 feet in No. 1 Wingfield, Section 5-16-15.

Shreveport Oil Corp. is drilling plug at 2,582 feet in No. B-2 Murphy, Section 9-16-15; Smitherman-McDonald are drilling at 2,805 feet in a deep test on the Dumas lease, Section 23-16-16; Southern Crude Oil Producing Co. is rigging up to drill No. 6 Lyell, Section 3-16-15, and set 12½-inch at 305 feet in No. 8 Graves, same section; Standard Oil Co. is drilling No. 18 Alphin, Section 3-16-15, at 2,520 feet, and the Sun Oil Co. has three wells drilling on the Hays lease, Section 3-16-15. The Texas Co. is drilling at 2,515 feet in No. 9 Graves, Section 3-16-15, and at 300 feet in No. 1 McGraw, Section 12-16-17.

Unity Petroleum Co. has four rigs running on the Roper lease, Section 3-16-15; Vance and others are shut down at 2,010 feet in No. 1 Kane, Section 12-16-16; Wabler and others tested salt water with a show of oil at 2,627 feet in No. 1 Morrison, Section 12-18-14, and waiting orders; Ward and others are drilling at 2,660 feet in No. 1 Goodwin, Section 16-16-15; Wetherbee and others at 2,680 feet on No. B-3 McGraw, Section 7-16-16, and at 250 feet in No. 2 Holloway, Section 6-16-16, and Zoder and others set 10-inch at 188 feet in No. 5 Allen, Section 18-17-14, for another test in the new deep sand territory east of El Dorado.

Ouachita County

Drilling in the north end of the Smackover Field has proved somewhat discouraging of late, the producing wells continuing to grow smaller in size and fewer in number, with more than the usual allotment of dry holes and salt water wells. At the close of the week, there were 114 drilling wells, 7 derricks, 18 rigs and no new locations.

Arkansas Drilling Co. is drilling at 1,000 feet in No. 1 Turnage, Section 34-15-16; Arkansas Fuel Oil Co. set 6-inch at 2,490 feet in No. 9 Snyder, Section 34-15-15; Atlantic Oil Producing Co. has 2,000 feet of fluid in 2 feet of sand in No. 5 Berg, Section 30-15-15, and is arranging to pump at 2,608 feet; Bailey & Murray are drilling at 1,540 feet in No. B-5 Rhoten, at 50 feet in No. B-7, and derrick up for No. B-6, Section 32-15-15.

Colcord and others tested salt water in No. A-2 Laney, Section 31-15-15, and re-cemented casing at 2,573 feet, and set casing at 2,555 feet in No. A-3, same section; J. E. Crosbie has three rigs running on the Berry lease, Section 33-15-15; Duho Oil Co. is down 2,125 feet in a deep test on the McKenzie lease, Section 36-15-16; Empire Oil & Fuel Co., swabbing to test at 2,605 feet in No. 6 Bradley, and derrick up for No. 7 Section 30-15-15, and Giles and others shut down for water at 1,350 feet in No. 4 McNeeley, Section 26-15-16.

El Dorado Union Oil Co. claims a show of sand at 2,707 feet in a test on the Eagle Lumber Co. lease, Section 17-12-15, 12 miles northeast of Camden.

Grayson and others have 1,200 feet of oil in the hole in No. 2 Williams, Section 5-16-15, and arranging to pump at 2,382 feet; Gulf Refining Co. is drilling at 2,563 feet in No. 8 Bennett, Section 33-15-15, and at 1,825 feet in No. 6 Section 32-15-15, and at 2,400 feet in No. 11, same section, and has two rigs running on the Umsted lease, Section 32-15-15. Houston Oil Co. is down 2,160 feet in No. 9 B. T. Laney, Section 31-15-15, and has two rigs running on the Reynolds lease, Section 27-15-15. Humble Oil & Refining Co. set liner in 46 feet of sand in No. B-4 Arnold, Section 26-15-16, at 2,055 feet, and has derrick up for No. B-5 same section; drilling No. 6 Flannigan, Section 6-16-15, at 1,035 feet; drilling No. 7 Hildebrant at 1,850 feet, and rigging up to drill No. 8, Section 28-15-15, and drilling No. 10 Laney, Section 32-15-15, at 500 feet.

Tested Dry

E. M. Jones tested dry at 2,308 feet in No. 1 Wilson, Section 26-15-18, about half way between Louann and Stephens, and will drill deeper.

Kellery Drilling Co. is down 1,200 feet in a test on the Reynolds lease, Section 7-14-16, 4 miles south and a little east of Camden.

Lion Oil Refining Co. is drilling at 500 feet in No. 1 Forest City Box Co., Section 25-15-15; Magnolia Petroleum Co. drilling at 1,350 feet in No. 4 Brown, Section 26-15-17, and setting casing at 2,560 feet in No. 7 Goodwin, Section 5-16-15; Marine Oil Co., coring at 2,995 feet in a deep test on the Umsted lease, Section 5-16-15, and Pat Marr setting casing at 2,367 feet in No. 1 and No. 2 Fee, Section 3-16-15.

Natural Gas & Petroleum Co. has 1,500 feet of fluid in the hole, 95 per cent salt water, in No. 9 Laney, Section 31-15-15, at 2,593 feet; Ohio Oil Co. has derrick up for No. 4 Arnold, Section 27-15-16, and has two rigs running and one derrick on the Lewis lease, Section 26-15-15; Phillips Petroleum Co. has nine rigs running on the Joyce lease, Section 33-15-15, three on the Laney, in Section 31-15-15, and one on the Harris, Section 34-15-15.

Pure Oil Co. set 10-inch at 300 feet in No. 10 Brister, and is rigging up to drill No. A-5 Brister, in Section 28-15-15; Reynolds and others are shut down for water at 2,200 feet in No. 4 Berg, Section 27-15-17; Sam Richardson is drilling at 1,250 feet in No. 2 Rhoten, Section 32-15-15, and the Simms Oil Co. has ten rigs running in the deep sand territory. Sinclair Oil & Gas Co. has three wells nearing completion in the Graves sand on the Berry lease in Section 33-15-15, and is down 150 feet in No. 16.

Southern Crude Oil Purchasing Co. is drilling at 2,550 feet in No. 5 Joyce, Section 34-15-15; Standard Oil Co. has 17 rigs running in the deep sand territory; Sure Oil Co. is bailing to test 14 feet of sand at 2,575 feet in No. 5 Joyce, Section 35-15-15, and set 10-inch at 410 feet in No. 3 Snyder, Section 34-15-15. The Texas Co. has four wells arranging to test in the Graves sand and is down 1,000 feet in No. 5 Neeley, Section 27-15-16; Unity Petroleum Co. is drilling at 900 feet in No. 2 Henry-Murphy, Section 2-16-15, and at 2,000 feet in No. 9 Umsted, Section 33-15-15, and Wingfield and others are drilling at 2,115 feet in No. 4 Umsted, Section 4-16-15.

Bienville Parish

J. E. Smitherman is drilling in chalk rock at 2,230 feet in No. 1 Hunt Hodge Lumber Co., Section 8-15-5, 6 miles southeast of Bienville.

Bossier Parish

Kendrick and others are drilling at 1,020 feet in No. 1 Webster, Section 9-18-11, 2 miles north of Haughton.

Bellevue Field

G. W. Wetherbee is drilling at 470 feet in No. 2 Beirly, Section 24-19-11.

Caddo Parish

In the Pine Island district, Dixie Oil Co. set 6-inch at 1,480 feet and is down 1,700 feet in No. 68 Robertshaw; Double Chief Oil Co. set 6-inch at 1,490 feet in No. 4 Spell, Section 15-21-15; Fortuna Oil Co. is rigging up to drill No. 20 Raimes, Section 22-21-15; Lewis Oil Corp. is setting liner, at 1,645 feet in No. 11 Raines, Section 22-21-15.

In the Hosston district, Austin Oil Co. is waiting on standard rig at 1,075 feet in No. 23 Hoss, Section 24-22-15 and is drilling at 400 feet in No. 24 Hoss, same section; Dixie Oil Co. set 10-inch at 90 feet and is down 700 feet in No. 2 Hoss, Section 24-22-15.

In the Oil City district, Fortuna Oil Co. is drilling in lime at 3,335 feet in No. 2 Levee Board, Section 8-20-15, and is down 3,830 feet in No. 1 Mitchell, Section 17-18-16, 4 miles west of Cross Lake.

Haynes Brothers are drilling in lime at 3,550 feet in No. 1 Louisiana Live Stock & Plant Co., Section 8-19-16, 6 miles southwest of Mooringsport.

Louisiana Oil & Refining Co. set 8-inch at 1,230 feet in No. 17 Green, Section 27-20-16, south end of the Caddo Pine Island Field.

Standard Oil Co. is drilling in broken sand rock at 1,965 feet in No. 173 Stiles, Section 27-21-16, in the old Caddo Field.

The Texas Co. is drilling at 2,575 feet in No. 5 Huron Land Co., Section 17-15-12, 3 miles south of Gayle and in the south end of the parish.

Claiborne Parish

Ohio Oil Co. is drilling at 150 feet in No. 1 Patton, Section 23-21-5, 12 miles east of Homer.

De Soto Parish

Dixie Oil Co. has derrick up for No. 1 Jenkins, Section 9-12-11.

Fortuna Oil Co. is drilling in lime at 3,545 feet in No. 1 Alexandria, Section 32-12-15, 5 miles east of Logansport.

Gulf Refining Co. is drilling in black lime and shells at 4,035 feet in No. C-18 Willis-Williams, Section 31-13-11, in the old Naborton Field.

La Salle Parish

Beckman and others have derrick up for No. 1 Urania, Section 25-10-1e, 3 miles southwest of Urania.

Craig and others are rigging up to drill No. 1 King, Section 36-10-1e, 2 miles south of Tullos.

Dixie Oil Co. is rigging up to drill

(Continued on Page 128)

East Central Texas

By Special Correspondent

CORSICANA, Tex., Sept. 5.—Routine oil wells and a few dry hole tests made up the completions in the past week in East Central Texas. The Atlantic Oil Producing Co.'s No. 2 Morrow, reported in the late field news last week as a 200-bbl. well, got the top of the sand at 3,203 feet and later reports on it credited it with 180 bbls. at a total depth of 3,205 feet.

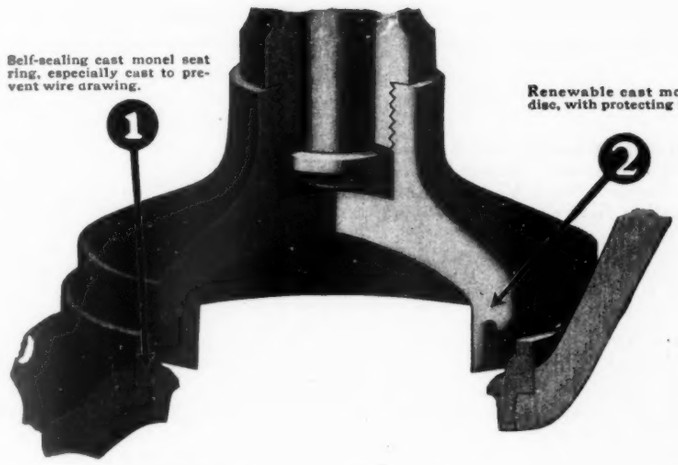
In the Bazette district, Navarro County, Penn and others were below 2,719 feet, drilling in lime, in No. 2 Vinson, Bailey survey. The top of the chalk was found at 2,630 feet, which is low. Gilbert Johnson and others' No. 1 Greer, Rushian survey, was fishing at 2,870 feet. The Austin chalk in this hole was found from 2,655 to 2,840 feet. Elliott & Nicolle's test in the Bazette area, which was started months ago when the Bazette boom was on, was shut down at 3,700 feet with nothing showing at any depth and drilling has never been resumed.

Peacock and others are testing a location on Wortham townsite despite the many discouragements to operators who were outside the trend that passed through a corner of the town. Peacock and others are below 2,000 feet in No. 1 Spencer.

Garland Kent's wildcat test on the Derden farm, Donnell survey, was abandoned at 1,880 feet.

The Pure Oil Co.'s No. 67 McKie, Powell Field, a shallow test, was shut down for orders at 2,505 feet. Barclay & Meadows' No. 1-A Cerf, Smith survey, made 150 bbls. the first 24 hours, 15 per cent water, from sand at 2,966-70 feet. Barclay & Meadows were drilling below 1,510 feet in No. 4-A I. N. Cerf, Smith survey. The Gulf Production Co. was drilling at 2,200 feet in No. 8 Bush, Smith survey. The Humble Oil & Refining Co.'s No. 20 Davis, Smith survey, pumps 15 bbls. a day from sand at 1,549-1,630 feet, and 50 bbls. a day from No. 21 Davis from sand at 1,549-1,635 feet. The same company's No. 10 Pugh, Smith survey, is a 30 bbl. well at 1,524-1,624 feet. Barclay & Meadows' No. A-2 Cerf, James Smith survey, was dry and abandoned at 2,150 feet. Farish, Watts & Collins' No. 4-A Smith was drilling in shale at 2,450 feet. The Texas Co.'s No. 14 Fleming, Weiner survey, tested dry at 1,720 feet and was shut down for orders at 1,755 feet. The Humble Oil & Refining Co.'s No. 4-A G. H. Kent, Havens survey, is a 16 bbl. pumper at 1,600-80 feet. The same company's No. 20 G. C. Kent started at 21 bbls. from sand at 1,507-1,622 feet and No. 21 G. C. Kent at 15 bbls. from sand at 1,600-50 feet. The Tidal Oil Co. completed No. 8 Thompson, Bahn survey, in sand at 1,600-50 feet and it is good for 15 bbls.

In the Richland district, Navarro County, Garland Kent abandoned his test on the Price farm, McNeal survey, at 2,006 feet. The Marnett Oil & Gas Co.'s No. 1 Hines, Meador survey, showed water in a core test at 2,929 feet and was drilling at 2,894 feet. The Atlantic Oil Producers Co.'s No. 2 Talley, Boren survey, had broken sand at 2,976-98 feet and a 75-bbl. production. The Gulf Production Co.'s No. 4 Hillburn, Hudson survey, is a 100-bbl. well at 2,983-97 feet. Graves and others' No. 2 Hock Stubbs, Boren survey, got sand at 2,983-97 feet with a showing of oil and a large quantity of salt water. The crew was rigging up standard tools. The Sun Co.'s No. 1 H. A. Swink, Boren survey, tested salt water at 3,183 feet and was plugging back to 3,030 feet. The same company's No. 2-B Swink, was drilling at 3,188 feet. A test at 3,013 feet.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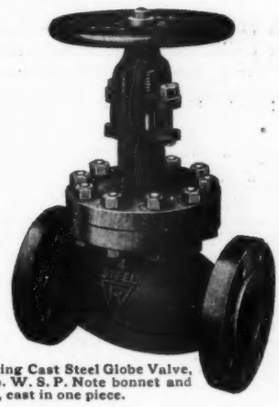

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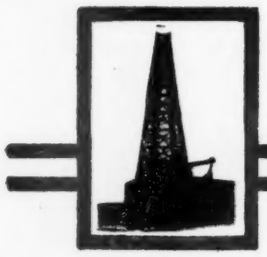


Southwest Texas Fields

By Staff Correspondent

Ballard & Underwood's No. 1 Eastwood at 4,100 feet in very hard black lime, Somerset Field, most interesting test in Southwest. Edwards lime failures not preventing new tests. Easthan & Tarver's No. 1 Viola Wilson, Medina County, pumping 100 bbls. Show in shallow field near Three Rivers.

SAN ANTONIO, Tex., Sept. 7.—The Edwards lime which, outside of the Luling Field has produced nothing in Southwest Texas but sulphur water and minor showings of oil and gas is continuing to get a large share of the thought of operators and especially of the geological departments with a growing inclination to drill below the Edwards and test out other formations. It is admitted however, that the geologist will have no surface geology to guide him in making locations with the view of getting production at lower depths.

Probably the most important well in all southwest Texas of which there is any definite information at this time is the Ballard & Underwood deep test in the Somerset Field which at 4,100 feet is in a black lime that is very hard and which carries a little showing of oil. First thought of oil men is Pennsylvanian but thus far the experts have found nothing by which to make a positive identification. The Pennsylvanian has been penetrated very few times on the Gulf side of the Balcones Fault and south of the Brazos River, if at all. A well drilled a few miles west of San Antonio by the Gas Ridge Syndicate and on the Gas Ridge where the surface exposure is Austin chalk is supposed, or was supposed, at the time to have reached the Pennsylvanian. It was a failure. The California-Medina Co.'s test, No. 1 Rothe in western Medina County and north of D'Hanis, is supposed to be in the Pennsylvanian at this time, having resumed drilling recently at 2,710 feet. It is much closer to the Balcones Fault than the Ballard & Underwood No. 1 Eastwood in Somerset.

The Kone-Willis No. 1 Fusselman-Murphy in Medina County 6 miles southeast of Hondo is shut down below 3,200 feet and is below the Edwards.

The Edwards lime is far from having been proven a failure as an oil producer and new tests scheduled to go to the Edwards lime and 100 feet or more into it are being organized every week along the Balcones system of faulting. Three or four are getting under way this week. Operators are loath to believe that Luling is the only place where it would prove production.

One operator who learned his business by starting as a roughneck many years ago and has amassed a fortune in the oil business but who uses no geologists advances the theory that production is just as unlikely where the formations are hit too high as too low and that when the Edwards is penetrated at about the same level as at Luling (2,150 feet) it will more likely be found productive than at other depths, and he takes the depth from the surface and pays no attention to sea levels.

When the operator starts drilling for the formations below the Edwards and especially for the Pennsylvanian he will find little to guide him in southwest Texas because but few tests have gone below the Edwards. Up to recently all tests stopped at the Austin chalk. United North & South Co. at Luling has several tests down to a point where they must either be in the Pennsylvanian or some formation that takes the place of the Pennsylvanian if that formation is absent. However, there is little if any reliable information available concerning these wells, one of which is at around 5,700 feet.

Medina's New Well

Reports from the Easthan & Tarver No. 1 Viola Wilson in Medina County, 10 miles southeast of Hondo and the same southwest of Dunlay, continue to improve. The well is 966 feet deep and has been pumping close to 100 bbls. a day. The pump was unable to lower the fluid in hole and was removed and the well bailed without lowering it. A larger pump is now being installed. Due to changes in the pumps and this and that the well has not been pumped steadily but in a week has accumulated around 600 bbls. of oil in steel storage. It is pumping pure pipe line oil. The oil is low gravity. The well is clearly exceeding the expectations of operators and has begun to attract the attention of scouts.

J. E. Walsh has closed a deal for some acreage near the well and will move in a rig. Arnett Oil Co. has changed a little gasoline outfit and put in a steam rig on its No. 2 Nixon, which has been standing at 934 feet for some time and is setting casing in order to test it out. Easthan & Tarver's No. 1 Viola Wilson offsets one of the Ina Oil Co. wells that has been making much less. The Arnett well is a little to the south of them.

Two miles to the northeast of the Easthan & Tarver well the nIn Oil Co. in No. 1 Blackburn failed to find the shallower production and last Thursday set casing at 1,842 feet to make a test of the Edwards lime after taking a core that showed some oil. The test will be completed some time this week.

Maxwell & Turman are erecting a 112-foot derrick 3 miles southwest of Dunlay and will probably have a rig in this week to make a test that will go to the Edwards lime unless it gets production above that at the shallow depth. It is 6 miles or more north and a little east of the Easthan & Tarver well. The Mid-Kansas test on the L. A. Haby is 3 miles straight south of Dunlay. Johnson Brothers of Ardmore, Okla., who are new operators in this section, are shut down at 500 feet on the Neuman tract in the same vicinity. The Kone-Willis test No. 1 Fusselman-Murphy is about 4 miles nearly due north from the Easthan & Tarver. It is shut down at around 3,200 feet.

Bee County

All three wildcat wells in Bee County have gas showings and are preparing to test soon. W. G. Clark's No. 1 Scott at about 3,200 feet, W. G. Frech's No 1 Lucas at a little below 2,500 feet and Ross & Frederick's No. 1 Welder at 2,667 feet.

Jim Hogg County

Magnolia Petroleum Co.'s No. 1 Bank on survey 415 in Jim Hogg County, 6 or 7 miles south of the Henne, Winch & Fariss Pool bailed last week and was getting a fine showing when the hole bridged and the bailer was 40 feet off the bottom. Later the bridge was drilled out and the well washed again and it is estimated to be a 25 to 50-bbl. well. Depth is 1,256 feet. The well offsets the Palacious test on survey 297 of J. W. Pippin, wildcat at 1,305 feet had a showing of oil that filled 900 feet into the casing There was a lot of open hole and it was impossible to tell where the oil sand was hit and casing was set too low and the well never got a satisfactory test. Magnolia drilled its offset and it looked for a time as though it was a failure and that an insufficient amount of cement had been used to set the casing and that mud was coming down the outside of the casing. Pippin has a replacement well started and down about 1,000 feet and will probably set casing in it early this week. This seems to be a distinct new pool. Information on the Magnolia well is meager.

In the Henne, Winch & Farris Pool in Jim Hogg County, O. W. Killam completed the Nos. 9, 10 and 14 Martine on Block 12 of survey 256 each good for about 200 bbls. at 2,070 feet.

Mirando Shipments

Shipments of crude from the Mirando Field at Mirando City for the month of August was 909 tank cars of 218,160 bbls., using an average of 240 bbls. to the car and making a daily average shipment of 7,037 bbls. This compares with 1,016 cars, 243,840 bbls. and daily average of 7,866 bbls. for July and 1,028 cars and 246,720 bbls. and daily average of 8,224 bbls. for June.

Three Rivers District

Powell Brothers have started No. 1 Thomas about 1 mile west of Three Rivers in Live Oak County, where efforts have been going on for the past six weeks to bring in a shallow oil field and with some show of success. The test is about one-half mile south of Glassco & Fallin's No. 1 Tips, which came in last April as a gasser at 660 feet and after making gas for a month for the glass factory at Three Rivers was lost when the seat for the casing gave way. When it was being worked over it showed a lot of oil. South of Powell Brothers' W. J. Walton No. 1 Odem at 850 feet is preparing to test out. Homer Powell is drilling at 900 feet on No. 1 C. E. Tips nearer to Three Rivers, Mitchell & Fallin have spudded in No. 1 Rogers-Tips 300 feet north of No. 1 Harris and No. 1 Harris is about one-fourth of a mile north of the abandoned No. 1 Tips. Doctor Chandler and others of Corpus Christi have spudded in No. 1 R Rogers-Tips as an offset to No. 1 Harris. No. 1 Harris at 660 feet is a gas well and is supplying the glass factory at Three Rivers.

Aransas County

Dixie Oil Co. has taken a lease on 40,000 acres of land in Aransas County on the coast above Corpus Christi. The block includes St. Joseph Island on which two attempts were made years ago to drill for oil. Other than St. Joseph Island the block surrounds St. Charles Bay.

San Patricio County

Sigmund's No. 6 well drilled as a replacement to No. 5, which was lost with a fishing job is drilling at around 2,200 feet and about ready to set and test.

Atascosa County

Rio Bravo Oil Co.'s wildcat on the Cortinas farm, 7 miles below the Somerset Field and in the northwestern part of Atascosa County is continuing to rathole down to the 2,900-foot showing had in the Suttle test, 1,500 feet away.

Atascosa Oil & Gas Co. is rigging up on the No. 1 Peeler. Halloran & Gil-

(Continued on Page 126)

News of Mexican Fields

By George Blardone

TAMPICO, Mexico, Sept. 4.—The week saw 16 wells completed in Mexican pools, of which 7 are producers with new flush production of 17,750 bbls., a better week than has been noted for the past month. The producers were all in the northern fields, with International Petroleum Co. leading the list with its No. 218, Lot 5 Cacalilao, which is rated good for 10,000 bbls. at 1,760 feet, a shallow well for the lot in question and one that is evidently on the peak of the immediate locality as Lot 5 is an extensive piece of acreage. In the Paciencia, just north of Cacalilao, Transcontinental Petroleum Co.'s No. 32 is good for 1,000 bbls. at 1,525 feet, another shallow well. In the Chapacao area of the Corcovado sector, Mexican Gulf Oil Co.'s No. 12 is flowing 5,000 bbls. at 2,304 feet; and in the old Panuco sector, Mexican Gulf's No. 17 Lopez is good for 150 bbls. at 1,925 feet. National Railway's No. 16 Chapacao is about a 300-bbl. well at 2,315 feet. Down in the old "Devil's Elbow" sector of the Panuco, Taylor and others, known locally as the "Caley well," No. 2, Lot 15 Lomas y Llanos, came in at 2,240 feet with a burst of oil that went over the derrick and was immediately shut in. Indications are that it will make say 300 or 400 bbls.

The more interesting well of the week, however, was Venable and others' No. 29 Caracol, the small well district nearest Tampico. This well came in at 2,351 feet, not a bad depth for this district, and it is good for 1,000 bbls. The well is located close to the El Barco border.

The Failures

The failures in the northern fields follow: In the Cacalilao sector, International Petroleum Co.'s No. 200, Lot 5, is a dry hole at 2,152 feet; La Corona Petroleum Co.'s No. 155, Lot 4, is the same at 2,181 feet. Transcontinental Petroleum Co.'s No. 182, Lot 4, is a failure at 2,200 feet; and its No. 202, same lot, drilled into salt water at 2,140 feet.

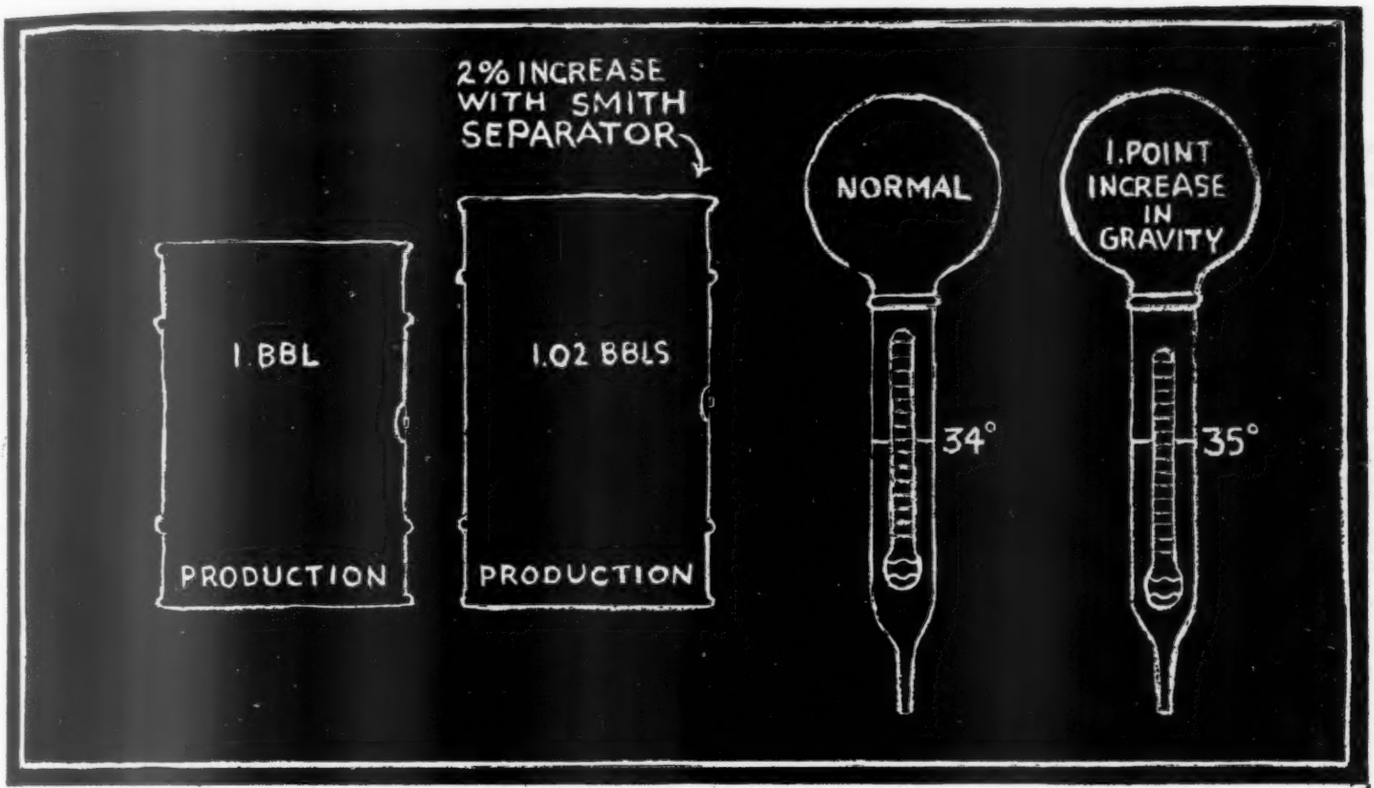
In the old Panuco, Cia Petroleum Maritima, No. 2 Piedras, Federal zone, is a dry hole at 2,250 feet. Up in the Corcovado, on the south bank of the Tamesi River, Intermex Oil Co.'s No. 5, Lot 4-D, finished at 2,860 feet and will tube to test for about 60 bbls., it is reported.

In the south fields, Huasteca Petroleum Co.'s No. 51 Tierra Blanca drilled into salt water at 2,284 feet, and the same company has quit its Nos. 7 and 9 Tres Hermanos, at 4,865 and 4,511 feet respectively, both dry holes.

Panuco

In the Panuco district of the northern field drilling operations as the week ended are best reflected as follows: Credito Petrolero's No. 2 Piedras is in gray lime at 1,881 feet. Island Oil & Transport Corp.'s No. 2-A, Lot 12, West Maguabes, is in shale at 1,220 feet; its No. 8, and No. 9, same, have each cemented 8-inch in gray lime at 1,450 and 1,437 feet respectively. East Coast Oil Co.'s No. 42 Laguna de Milpa is in gray lime at 2,030 feet; No. 44, is in gray shale at 455 feet; No. 450 Ingenio is in gray shale at 340 feet. La Espuela Oil Co.'s No. 5, Lot 11 Islota, is in gray lime at 1,980 feet. International Petroleum Co.'s No. 2 Piedras, is in gray shale at 945 feet. Mexican Sinclair Petroleum Corp.'s No. 10 Tananturo is in

(Continued on Page 121)



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The answer is shown clearly, regardless of the size of your production or the present gravity you are securing.

The Smith Separator, under exhaustive tests conducted in many fields, under every possible production condition, has proven conclusively that it increases the gravity in the stock tanks at least one degree.

And while it increases the gravity it also increases production at the rate of 2% for every degree of gravity. This is not only our claim—it is a proven fact that can be substantiated beyond possible doubt.

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If your gravity can be raised one or more degrees, and if your production can be increased 2% for every degree of gravity increase, you certainly profit two ways.

Take the figures shown at the left in the panel. The first column shows the price scale of the Prairie Pipe Line Company. The second column shows the number of cents increase in price per degree of gravity plus 2% increased production.

Find your present gravity in the price schedule; add to it the difference between present price and price for next highest degree plus 2% increased production, multiply it by your total production per day and you have the simple answer to the profit possibilities of a Smith Separator on your production.

Worth looking into, isn't it?

Next week we will show you how to handle that troublesome production tax problem. Watch for it.

NEW PRICES

New Prairie Schedule		Increase with Smith Separator
28 to 28.9	$1.15	$ .1046 per bbl.
29 " 29.9	1.23	.1062 " "
30 " 30.9	1.31	.1078 " "
31 " 31.9	1.39	.1094 " "
32 " 32.9	1.47	.1110 " "
33 " 33.9	1.55	.1126 " "
34 " 34.9	1.63	.1142 " "
35 " 35.9	1.71	.1158 " "
36 " 36.9	1.79	.1174 " "
37 " 37.9	1.87	.1190 " "
38 " 38.9	1.95	.1206 " "
39 " 39.9	2.03	.1222 " "
40 " 40.9	2.11	.1238 " "
41 " 41.9	2.19	.1254 " "
42 " 42.9	2.27	.1270 " "
43 " 43.9	2.35	.1286 " "
44 and up	2.43	.0486 " "

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California Field Operations

By L. P. Stockman

Maricopa Flats gusher still sanded up. Other companies rushing work in that area. Chanslor-Canfield Midway Oil Co. gets extra large well in Torrance Field. E. J. Miley establishes rotary drilling record by carrying test at Rosecrans to 7,430 feet. Has 127 feet oil-bearing formation.

LOS ANGELES, Cal., Sept. 5.—Production at Inglewood held its own for another week, and although six new wells were added to the producing list, there was no material change in the total daily output. The average well production, however, registered a drop of 20 bbls., declining from 825 bbls. last week to 805 bbls. during the past seven days. The output from new wells for the past several weeks has practically offset the normal decline with the result that very little change has taken place in the total daily production. It required six new wells this week to offset the drop in older producers, three of which were contributed by the Standard Oil Co. This concern brought in two new producers on Los Angeles Investment Lease No. 1, and one on Vickers Lease No. 1. The latter was No. 16, drilled to 2,650 feet and finished with an 8¼-inch oil string carrying 1,160 feet of 80-mesh screen. The initial flow of 1,380 bbls. tested 19.9 degrees and showed a cut of 3 per cent. Vickers Lease No. 1 still shows No. 19 at 1,041 feet, No. 17 at 2,671 feet and No. 18 at 2,665 feet, the latter two of which should be on production sometime during the next few weeks.

The Standard's two new wells on Los Angeles Investment Lease No. 1, were Nos. 27 and 28. The former was drilled to 2,666 feet and finished with an 8¼-inch oil string carrying 1,370 feet of 90-mesh screen, while the latter was carried down to 2,665 feet and finished with an 8¼-inch oil string including 1,326 feet of 90-mesh screen. Number 27 is rated at 1,970 bbls. of 17.6 gravity oil which cuts 5 per cent, while No. 28 is gauged 1,894 bbls. of 17.6 gravity oil cutting 5 per cent. Both are flowing through 1-inch beans, the average pressure being 480 pounds. The Standard's next completion on this property, Los Angeles Investment No. 1, should be No. 29, which is at present being pushed ahead at 2,460 feet. Numbers 30, 31 and 32 should follow later within a short time of each other, as they are all going ahead around 1,500 feet. Number 5 on Los Angeles Investment Lease No. 2, at 2,047 feet looks like an early completion but, judging by the showings to date, it should only be a small pumper. Number 6 is going ahead in a gray sand at 2,250 feet, and, although it is deeper than the completion depth of No. 5, it has not yet picked up the pay.

Encouraging Showings

Number 2 Stocker is receiving most careful attention, following the coring of a brown shale streaked with oil sand at 1,290 feet. This property has heretofore been regarded as rather unpromising, following the abandonment of a deep dry hole. The favorable showings just found in No. 2, look rather encouraging, however, and the company may, perhaps, be successful in developing small production on the lease.

The Petroleum Securities (Doheny) brought in two flowing wells and landed the oil string in another, No. 14 Cone, at 2,560 feet. The company's largest completion was No. 15 Rubel, brought in from 2,500 feet after being finished with an 8¼-inch oil string carrying 1,308 feet of shop perforated and 1,500 feet of 3-inch tubing. The initial tank gauge was 1,806 bbls. of 21.4 gravity oil which showed a cut of 1 per cent water and 3 per cent sand. Number 6 Rubel was only slightly smaller than No. 15, its predecessor on this lease. It is rated at 1,780 bbls., the oil, which is flowing through a 1-inch bean under a pressure of 400 pounds, testing 21.7 degrees and showing a cut of 3 per cent. The hole was carried down to 2,500 feet and finished with an 8¼-inch oil string carrying 1,325 feet of shop perforated and 1,505 feet of 3-inch tubing.

The Brownmoor Oil Co. has finally finished its No. 3 Brown but success did not attend the company's efforts until the greater part of a month had been spent in overcoming a troublesome water condition. The hole was drilled into bottom water at 1,896 feet but several plugging operations brought the bottom of the hole up to 1,877 feet, where a successful water shut off was secured. When put on the beam it started off pumping 100 bbls. of 17.4 gravity oil which cut 2 per cent. Number 4 was spudded in following the completion of No. 3 and the company, profiting by its mistakes, should finish it in short time. Number 6, which was also drilled into bottom water and later plugged back to 2,050 feet, will apparently require further work as the plug put in bottom has not proven effective. This is indicated by the fact that the production is cutting approximately 60 per cent water.

To Make Thorough Test

The California Petroleum is making a water test on No. 6 Smith at 3,023 feet and if a shut off has been effected it will be passed for production. Only a small pumper is expected at best. Oscar Howard, who has decided to make a thorough test of his No. 1, Dominguez, is going ahead at 4,855 feet and it is believed that the hole will be carried down to at least 5,000 feet before abandoning. The Pacific is working with two holes on its Baldwin Lease, both of which are first line offsets, and will undoubtedly finish them before attempting additional work. Number 12, a recent completion, which is also a first line well, shows indications of edgewater and the company will undoubtedly hold its future drilling program in abeyance pending the outcome of the two present drillers, No. 16, at 1,203 feet and No. 18, at 1,671 feet. The General Petroleum is drilling ahead in No. 2 Brown in the northwestern part of the field at 4,344 feet and, since the upper showings were practically nil, the only hope of securing commercial production lies in the development of a deep zone.

It had been expected that the Associated would have finished No. 20 Vickers before this time but a slight delay has held up the production test. The hole, which has been carried down to 2,818 feet and finished with an 8¼-inch oil string, will be passed for production within the next few days. The Shell has three drillers on its Rindge property, two of which have encountered water trouble. The third, No. 13, is drilling ahead at 2,544 feet and rapidly nearing completion depth. Number 11 ran into water at 2,820 feet, while No. 14, drilled to 2,697 feet and finished with an 8¼-inch oil string carrying 1,280 feet of 80-mesh screen, failed to make commercial production on the beam. It is pumping a small quantity of salt water and oil to sump but may eventually clean up.

Midway-Sunset

The Obispo's No. 6, out on the Maricopa Flats, continues to be the center of attraction in the Midway-Sunset area and, although the company has spent the past two weeks trying to return it to production, its efforts has so far proved futile. When the well sanded up following its initial flow the company was duly thankful, as no preparations were made to handle so large an output. Sumps were hastily constructed but they would not have lasted very long. It was not expected that any difficulty would be experienced in redrilling and cleaning out the hole, but it seems to have sanded up very effectively and as each succeeding bridge is drilled out the gas pressure forces additional sand up into the hole. Heavy mud is being used to prevent a blowout and no difficulty is expected from this source. Its refusal to flow, however, is causing some anxiety and it is quite possible that the Obispo will start another hole before this one is again on production.

New work is being pushed ahead quite rapidly by other operators in the immediate vicinity, with the deep sand as the objective. The Trojan Oil Co.'s well No. 2 in Section 32-11-23, which is now down 3,850 feet, should be among the first to reach the Obispo sand. Company officials are quite optimistic and, inasmuch as the two holes are but a a few hundred feet apart, they have every reason to believe they will be successful.

The General Petroleum is building rigs for two deep tests on Section 32-12-23, one to be designated as No. 10-A Annex and the other No. 14-B Essex, both of which are favorably located. It will be some time, however, before either reaches completion depth. The Pacific has a location staked for No. 35 on Section 5-11-23, to the south of the Obispo property and rig timbers will probably be hauled in shortly. The California Petroleum has already started work on one deep test and will probably get another under way within a short time. The Taft Well Drilling Co. spudded in the El Dora Oil Co.'s projected deep test on property adjoining the Obispo's holdings to the east, and it will be pushed ahead rapidly. The United Oil Co. is scheduled to start some new work on Section 32-12-23 within the next 60 days, while the Associated is grading for its first hole on the recently acquired Atlas property. The Midland Oilfields is building rig for No. 7, which will be carried down to the deep sand. The Midway Northern Oil Co. is dickering for development of its property just north of the Obispo's lease, and it is quite probable that something definite will be announced within the next two weeks.

Two Wells at Midway

The Pacific Oil Co. has just finished two new wells at Midway and will probably pass them for production within the next week or 10 days. The wells in question are No. 20 on Section 19-31-24 and No. 1 on Section 29-31-24. Well No. 20 offsets the Federal Drilling Co.'s lease, upon which a deep sand was discovered at Midway a few months ago. The Pacific has several other drillers on this property, the most promising of which seems to be No. 22, now at 4,800 feet. The Federal Drilling Co.'s original deep sand well has proven to be quite a consistent producer on the beam and is averaging around 375 bbls. a day. No. 2 at 4,944 feet and No. 3 at 5,017 feet, however, do not look any too promising.

The Honolulu Consolidated is making preparations to put two wells, Nos. 13 and 83, on the beam within the next week or ten days. Both are located in Section 4-32-24, the former being down 3,103 feet and the latter 3,388 feet. The North American Consolidated has two potential producers on Section 30-21-24 in No. 23 at 4,100 feet and No. 24 at 4,250 feet. The Formax Oil Co.'s well No. 20 in the Hovey Hills, Section 36-32-23, is now on steady production and pumping at the rate of 75 bbls. a day. This well showed considerable water for some time following its completion but has cleaned up nicely. H. A. Godde, deputy oil and gas commissioner, called a meeting of operators in the Midway-Sunset area during the week and a definite program is being formulated in order that water shut offs will be general and effective throughout the area.

The Union Oil Co. brought in its No. 11 Federal at Elk Hills and augmented its production 306 bbls. a day, the oil testing 19.8 degrees and showing a cut of 1 per cent. No. 1 Mason in the Buena Vista Hills, Section 36-31-22, is going ahead in a blue shale at 2,660 feet. This extension well looks good for production shortly. The General Petroleum has suspended work on No. 4 Gillon, in the Wheeler Ridge Field, Sec-

(Continued on Page 118)

TANKER SHIPMENTS FROM LOS ANGELES TO ATLANTIC AND GULF COAST PORTS

Following is a list of tankers, date departed, destination, kind of cargo and amount in barrels:

Joseph Seep, August 24, Baton Rouge, refined	80,016
Agwistone, August 26, New York crude	105,821
H. M. Storey, August 26, New York, crude	112,706
Wm. Rockefeller, August 28, New York, crude	135,711
W. M. Irish, August 29, Philadelphia, refined	76,998
Swiftscout, August 29, Fall River, refined	79,303
E. T. Bedford, August 30, New York, crude	109,572
Coastwise	
Kewanee, August 24, Avon, refined	27,491
Los Angeles, August 24, Martinez, crude	72,840
Deroche, August 24, Oleum, crude	73,815
El Segundo, August 26, San Diego, refined	32,858
W. S. Miller, August 26, Richmond crude	73,315
Richmond, August 27, Portland, fuel	64,057
Cathwood, August 27, Martinez, crude	73,055
El Segundo, August 28, Point Wells, refined	31,095
D. G. Scofield, August 28, Richmond, crude	77,872
J. A. Moffett, August 28, Richmond, crude	64,171
Los Angeles, August 29, Martinez, crude	75,148
W. S. Miller, August 30, Richmond, crude	74,213
Exports	
Charles Pratt, August 24, Halifax, crude	110,081
Watertown, August 25, London, refined	75,057
Tejon, August 28, Balboa, fuel	70,069
Toco (Br.), August 29, Chile, fuel	71,874
Santa Maria, August 29, Chile, fuel	95,678
Sunbeam, August 29, Japan, fuel	75,656
El Grillo (Br.), August 30, Chile, fuel	65,602
From Ventura	
Frank G. Drum, August 28, Avon, crude	72,148
Oleum, August 28, Martinez, crude	34,749
Frank H. Buck, August 29, Avon, crude	63,997
From Port San Luis	
La Placentia, August 26, Oleum, crude	78,316
San Antonio, August 27, San Francisco crude	60,015
From San Francisco	
Los Alamos, August 26, Vancouver, refined	41,780
Col. E. L. Drake, August 30, Portland, refined	36,418

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Answer: Budd-Michelin Dual Wheels.

Q: *What is a Dual Wheel?*

A: Two Budd-Michelin single wheels on one hub.

Q: *What are the advantages?*

A: Now you've asked a mouthful!

DUALS mean four wheels under the heavy end of the load, instead of two. Two wheels in front. One spare. All the same size—all interchangeable.

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Gulf Coast Oil Operations

By P. L. McGreal

Big wells in Hull, Orange and South Liberty Pools, offset decreases of past three weeks. New production, 13,750 bbls., expected to decline rapidly to normal. Mecom Co.'s No. 4 Taylor, Hull, increases to 7,500 bbls., 16 per cent water. Gulf Co.'s No. 11 Deussen, South Liberty, flows 1,500 bbls.

HOUSTON, Tex., Sept. 7. — The erratic character of the Gulf Coast division manifested itself again during the week when the estimated daily average gross production increased 6,883 bbls. over last week, due to big wells in the Hull, Orange and South Liberty pools. The increase this week more than offsets the decreases recorded during the past three weeks. The estimated gross for the week ending September 5 is placed at 103,635 bbls. The South Texas districts are credited with 93,118 bbls. of the total and those in South Louisiana with 10,517 bbls. daily average.

The Hull Pool shows an increase of 5,250 bbls. over last week. The Orange Pool increased 1,875 bbls. and South Liberty 710 bbls. Small declines are noted in some of the old districts.

The estimate for each district is as follows:

District—	Gross Bbls.
Batson	1,490
Blue Ridge	475
Barber Hill	90
Big Creek	980
Dayton	48
Damon Mound	1,120
Edgerly (La.)	580
Goose Creek	9,400
Humble	4,270
Hull	24,350
High Island	490
Jennings (La.)	807
Lockport (La.)	125
Markham	75
Orange	16,785
Pierce Junction	410
Spindletop	1,050
Saratoga	1,590
Sour Lake	4,270
South Liberty	14,610
Vinton (La.)	8,925
Welsh-Anse La Bute (La.)	80
West Columbia	11,425
*Miscellaneous	190
Total	103,635

*Includes Nacogdoches, New Iberia and Kleberg County.

Southwest Fields

The gross output of the Southwest fields declined 2,288 bbls. compared with last week. Both the Luling and Lockhart fields are off from last week.

The daily average for each field is as follows:

District—	Gross Bbls.
Luling	22,900
Laredo	4,050
Somerset	2,445
Callihan	295
Rockdale-Minerva	810
Jim Hogg County	3,670
Lockhart	11,140
Total	45,310
Grand total for week	148,945
Grand total last week	144,350
Increase	4,595

The big new production during the week came mostly from worked over wells. The Mecom Oil Co.'s No. 4 Taylor, on the northwest side of the dome in the Hull Pool, was one of these. It started off flowing 5,000 bbls. at 4,025 feet, increasing during the week to 7,500 bbls., showing 16 per cent water. The Humble Oil & Refining Co.'s No. 4 Merchant, on the same side, is pumping 406 bbls. at 4,125 feet and the Higgins Oil & Fuel Co.'s No. 4 Merchant is bailing at 2,850 feet. The Gulf Production Co.'s No. 55 Phoenix, on the southeast, is flowing 1,006 bbls. at 3,475 feet.

In the Orange Pool, the Orange Petroleum Co.'s No. 6 Chesson is flowing 3,500 bbls. at 4,664 feet with three-quarter-inch choker on. One joint of screen was set. It is a hole that was deepened in the old part of the district. The Sun Oil Co.'s No. 1 Johnson, a work over, came back flowing 1,000 bbls. at 4,060 feet. The Gulf Production Co.'s No. 2 Hager fee, another work over, is flowing 200 bbls. and the Atlantic Oil Producing Co.'s No. 4 Moore is pumping 125 bbls. at 3,330 feet. The Edgerly Petroleum Co.'s No. 11 Carbello will pump at 3,310 feet. The Gulf Production Co. abandoned No. 10 Peveto at 5,010 feet.

South Liberty

In the South Liberty Pool, the Gulf Production Co.'s No. 11 Deussen in the south end of the pool, came in at 3,400 feet flowing 1,500 bbls. Its No. 9 Deussen is pumping 40 bbls. at 3,325 feet. The Sinclair Oil & Gas Co.'s No. 4 Condict, also in the south end, is pumping 250 bbls. at 3,320 feet. The Texas Co.'s No. 7 Simms is bailing. The Peer Oil Co.'s No. 1 Hamilton, 3,500 feet south of production, is bailing again at 3,199 feet. It showed salt water last week and a 4-inch liner was set and cemented.

Other completions during the week include the Lillian Oil Co.'s No. 1 Terrell in the Spindletop Pool, a salt water well at 875 feet. The Brechim Drilling Co.'s No. 1 Gladys there is bailing at 710 feet. In the Saratoga Pool, Paggi Brothers Oil Co.'s No. 7 Lewis is making 300 bbls. of fluid, 11 per cent oil, at 1,425 feet. The Vacuum Oil Co.'s No. 1 Teel is bailing at 3,200 feet. It is an important test on the east side of the pool. The Yount-Lee Oil Co. abandoned No. 4 Jackson, in the Sour Lake Pool, at 2,265 feet. The Eagle Point Oil Co.'s No. 1 Jackson there will make a pumper at 2,175 feet. In the Goose Creek Pool, the Humble Oil & Refining Co.'s No. 63 Smith will pump at 2,510 feet. No. 64 Smith got salt water at 3,960 feet and will be drilled deeper.

The Sun Oil Co. abandoned No. 5 B and O in the semi-pool at High Island, Galveston County, at 660 feet. In the Lockport district, near Lake Charles, La., another semi-pool, the Vacuum-Gulf Co.'s joint No. 1 Friedberg and Wolf will make a pumper at 2,465 feet.

Outside Proven Pools

In districts outside of the proven pools, the Humble Oil & Refining Co.'s No. 2 State Land, south of Kingsville, Kleberg County, is pumping 100 bbls. at 1,900 feet. C. T. Rucker's No. 1 Fisher, in Chambers County, bailed salt water at 2,280 feet and will be drilled deeper. The Houston Oil Co. abandoned No. 1 Crow in Jefferson County at 2,868 feet and the Gulf Co. quit No. 3 Thomas, at Fannette, in the same county, at 1,010 feet in gyp. The Rycade Petroleum Corp. abandoned No. 2 J Meier, off the Nash-Wisdom Dome in Fort Bend County, at 1,000 feet.

In St. Martin Parish, Louisiana, the Ohio Oil Co. abandoned No. 1 Champaign at 4,500 feet.

Completions during the week total 26, of which 7 were dry and abandoned and 3 salt water wells. The new production aggregates 13,750 bbls., or within 2,175 bbls. of the total for the entire month of August. Five wells are bailing at the close of the week.

A large number of drilling outfits in the Coastal section have gone into storage to wait for a revival of operations. More have been shipped to other fields by contractors, who hope to find employment for them. The price of $3.50 per foot for drilling remains unchanged despite the depression in all the pools. Practically all the major companies own their own drilling rigs and drill on a per diem wage basis. Supply houses say drill pipe, tubing and casing quotations are holding about the same and they do not anticipate any marked declines in the near future. Shipments are more prompt than they have been, indicating the mills are catching up on orders.

The sudden change in the production situation in the Coastal region is not expected to effect crude quotations, because the recent large completions will probably decline rapidly and the normal output be maintained.

Drilling in the Pools

The Texas Co. has started No. 1 La Jarza, on the east side of the Batson Pool. The East Batson Oil Co. has a derrick up for No. 10 Donohoe. The Sterling Oil Co.'s No. 1 McClure is around 765 feet.

In the Saratoga Pool, the Fountain Production Co.'s No. 3 Ogden is drilling at 2,010 feet. The Rio Bravo Oil Co.'s No. 1 Fountain and the Skinner Oil Co.'s No. 1 Parrish are both shut down. They are on the north side.

In the Sour Lake Pool, the McNamara Oil Co.'s No. 13 Bashara is drilling around 2,000 feet and the Humble Oil & Refining Co.'s No. 19 Bashara is below 1,435 feet. The Hankamer Oil Co.'s No. 2 fee is at 975 feet. Falloure & Hennings No. 3 Jackson is around 3,345 feet. The Barclay Oil Co.'s No. 1 Hill is at 976 feet. The Lake View Oil Co.'s No. 44 Hardin is rigging and the Eagle Point Oil Co. has a derrick up for No. 2 Jackson.

In the Orange Pool, the Gulf Production Co. is rigging to deepen Nos. 3 Hager fee and 1 Grubbs. The Atlantic Oil Producing Co. is rigging No. 1 Peveto. The Rycade Petroleum Corp.'s No. 2-B Cow Bayou is fishing at 4,650 feet and No. 1-C is drilling at 4,355 feet. The Gulf Production Co.'s No. 2 Hammam-Consolidated is drilling around 5,345 feet. No. 8 Chesson is at 4,615 feet. The Humble Oil & Refining Co.'s No. 12 Winifree is drilling below 4,500 feet and No. 19-A Chesson is around 4,600 feet. The Edgerly Petroleum Co.'s No. 1-B Chesson is at 4,314 feet. The Continental Oil Co.'s No. 6 Chesson is idle. No. 9 is working over and No. 16 is drilling around 3,345 feet. The Orange Petroleum Co.'s No. 5 Winifree is at 4,355 feet and No. 9 Chesson is below 1,435 feet. The Kishi Development Co.'s No. 6 Mcguire is working over at 3,375 feet. It showed for a well and then sanded.

Liberty County Pools

In the Hull Pool, the Republic Production-Houston Oil Co.'s joint No. 20 Dolbear is deepening at 3,500 feet and No. 117 is drilling below 3,600 feet. The Humble Oil & Refining Co.'s No. 9 Guedry is drilling around 2,435 feet. The Texas-Vacuum Co.'s joint No. 6 Hannah is drilling at 1,315 feet. The Peer Oil Co.'s No. 8 Harrison is in a sand showing oil at 2,875 feet. It is 90 feet higher than the sands usually found in that part of the pool. Casing will be set and a test made. The Mecom Oil Co.'s No. 6 Taylor is drilling deeper at 4,105 feet. The Gulf Production Co.'s No. 6 Scarborough is drilling at 935 feet. Its No. 56 Phoenix is drilling around 2,315 feet. A derrick is standing for No. 57. No. 58 is rigging to commence drilling. The Yount-Lee Oil Co.'s No. 7 Stengler is working over and the Cantor Oil Co. is doing the same in No. 1 Smith.

The South Liberty Pool is like a skyrocket. It started off with a bang last January. At one time 82 wells were drilling there. Now three rigs remain. The Sinclair Oil & Gas Co.'s No. 5 Condict is drilling around 3,135 feet. The Associated Oil Co.'s No. 5 Deussen fee is around 3,135 feet and the Gulf Production Co.'s No. 3 Antonio is below 3,425 feet. The three drilling wells are in the south end.

In the Goose Creek Pool, the Sun Oil Co.'s No. 17 Bartlett-Smith is deepening at 2,188 feet. The Gulf Coast Oil-Crown Central's No. 27 Galliard is deepening at 2,716 feet. The Norman Bruce Petroleum Co.'s No. 3 Scorrgea is at 3,135 feet. On the west side of the creek the Humble Oil & Refining Co.'s No. 4 Harrell is drilling around 4,635 feet. Same company's No. 28, on Galliard Peninsula, is around 4,245 feet. Skirting along the bay shore, the Gulf Production Co.'s No. 32 Beaumont is around 2,830 feet and No. 31 State Land is below 2,886 feet. The Southern Exploration Co.'s No. 5 Freeman is drilling around 2,610 feet.

In the Spindletop Pool, the Gulf Production Co.'s No. 215 Gladys is drilling at 855 feet. The Stella Oil Co.'s No. 7 Keith-Ward is around 1,060 feet and shut down. The Lotus Oil Co.'s No. 1 Gladys is drilling at 946 feet. The Unity Oil Co.'s No. 86 McFaddin is around 865 feet. Telshaw and others' No. 1 Trembly is drilling at 1,025 feet.

In the West Columbia Pool, the Humble Oil & Refining Co.'s No. 1 M. & W. is drilling below 3,615 feet and No. 1 Wilson will be drilled deeper. The Hyde Production Co.'s No. 8 McGregor is sidetracking to drill deeper.

Hamm & Co. is rigging No. 3 Bryan at Damon Mound.

At Pierce Junction, H. R. Cullen is deepening No. 6 Howe at 3,800 feet. The Gulf Production Co.'s No. 17 Taylor is drilling around 3,900 feet. The Rio Bravo Oil Co.'s No. 1 Settegast is around 3,915 feet.

At Blue Ridge, the Gulf Production Co.'s No. 12-C Blakely is drilling around 3,435 feet and The Texas Co.'s No. 13 Robinson is below 3,760 feet.

At Big Creek, the Gulf Production Co.'s No. 24 Davis is around 2,716 feet and No. 4 Davis at Long Point is below 1,100 feet.

At High Island, the Gulf Production Co.'s No. 3 Smith is drilling around 3,050 feet and No. 4 Smith is at 2,122 feet. The Sun Oil Co.'s No. 8 Cade is fishing at 2,910 feet. No. 10 Cade is rigging up. No. 1 is drilling around 2,335 feet. The Island Oil Co.'s No. 1 McCarthy is drilling below 2,230 feet.

South Louisiana Pools

The Lake Charles Petroleum Co.'s No. 2 Fairchilds, in the Edgerly Pool, is drilling around 2,810 feet.

In the Jennings Pool, the Coastal Fuel Oil Co.'s No. 90 fee is drilling.

In to Vinton Pool, The Texas Co. is deepening No. 1 Gray. The Gulf Refining Co.'s No. 64 G. N. G. is around 2,545 feet. The Vinton Petroleum Co.'s No. 14 Rescue is drilling around 1,180 feet. Gulf Refining Co.'s No. 37 Star is drilling, as is No. 41 Vincent. Wilson & Baoach's No. 9 Parks is below 2,765 feet.

In the Lockport district, Calcasieu Parish, the Vacuum-Gulf joint No. 3 Miller is below 4,530 feet. No. 4 Miller is drilling around 3,340 feet. No. 1 Phoenix is around 4,470 feet. No. 3 Lock-Moore is drilling at 2,765 feet. The Marland Oil Co.'s No. 1 Phoenix is drilling below 3,670 feet.

At Jefferson Island in Iberia Parish, the United Oil & Gas Co.'s No. 1 Bayless & Jones is in black shale at 3,940 feet. Same company's No. 1 Fannie

(Continued on Page 125)

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Also in "Junior Booster" Size
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GARDNER

Rocky Mountain Area

By F. B. Taylor

Fort Collins shipments by rail in August 43,800 bbls. Scott well going deeper. Union Co. has three producers on Wellington Dome and four on Fort Collins. Jackson County structure to be tested. Midwest Co.'s Lakota well making 4,500 bbls., largest in sand. La Barge Field Production. Mellen Dome test.

CASPER, Wyo., Sept. 5.—The drilling in of the Blunck and Scott wells in the Fort Collins Field in Colorado has made a showing in the August shipments of crude from that field, during the past month; Fort Collins Field sent out a total of 43,800 bbls of crude by rail and this does not take into consideration the amount of oil used locally. This crude went to two refineries; the Utah Oil & Refining Co.'s plant at Salt Lake City took 20,600 bbls. and the Florence refinery at Florence, Colo., took 23,200 bbls. Both refineries are controlled by the Standard of Indiana and the Continental companies.

The Scott well of the Union Oil Co. of California is to be drilled deeper. To do this an attempt was made to start the tubing and take it out of the hole. The well started to flow as soon as the tubing was raised and went wild for a short period before the crew got it under control again. This well is producing from the upper part of the sand and a break in the sand shuts off a larger production that can be obtained with deeper drilling. The Blunck well will likewise be drilled deeper to the sand blow the break.

The Union Oil Co. of California now has seven producing wells in the Fort Collins Field and this company is the only one that has any producing wells. Three of these are on the Wellington Dome and four on the Fort Collins Dome; the Douglas Lake Dome lying between the other two has been abandoned and has a dry hole drilled upon it. The field consists of three separate structures or domes and two have been found productive.

The Union of California has several drilling wells quite deep and two completions are expected during September. The Larsen well on Section 19-8-68, is drilling at 4,460 feet and is a little over 100 feet above where the sand is expected. The Hess well on Section 31-10-68 is drilling at 4,540 feet and is about 150 feet above the sand. The Buckeye well on Section 31-10-68 on a tract of Union Pacific land is at 4,231 feet and expects the pay within the next 100 feet.

No other wells are expected to reach the sands in the near future and while other firms have drilling wells at depths below 4,000 feet, these wells are so far out on the edge of the structure that they will have to drill much farther to reach the pay The Union of Colorado well on Section 8-9-68 is at 4,270 feet but the sand there is thought to lie about 800 feet below the present bottom and this well will have to be drilled about 1 mile deep before it reaches the sand.

Jackson County Structure

The Continental Oil Co. has core drilled a hidden structure in Jackson County, Colorado, near Walden, with a dozen holes and the company is satisfied the structure exists and is worth a test. The well will be started at once. Jackson County lies along the Wyoming border and between the Moffat Field and the east slope of the mountains.

The old Florence Field in southern Colorado is also attracting attention again. This was one of the first operations of any size in this region and is a shallow shale production, the wells being about 900 feet deep. Several deep holes have been put down to search for the mother pool that is thought to feed the Florence Field, but without success. This operation led to the locating of the first refinery in Colorado at Florence, which is at present controlled by the Standard of Indiana and the Continental Oil Co. The field is to have five new wells put down on the outskirts of the present development and by local Colorado companies that have secured leases on tracts there.

The Union Oil Co. of California has broken ground and is building a gasoline absorption plant on the Wellington Dome and an arrangement is understood to have been made with a large Portland cement plant near there to furnish the gas after its compression for fuel and power for the plant. Fort Collins city is also to have a natural gas supply from the same source. An option has been given by the Union of California to the Cities Service Co. for all gas production of the Union after the gasoline content has been removed.

Wells in La Barge

The La Barge Field in Lincoln County, Wyoming, is slowly brining in wells. The latest completion is a well of the Wyotah Oil Co. that is in the top of the pay at 800 feet and showing for a well. At present the well is shut down waiting on tankage.

The La Barge Field is a shallow proposition about 40 miles north of Kemmerer and the oil is an except quality found in sand lenses in Tertiary shale. So far the field has used only what production is necessary for the operation of the drilling wells and the operators are waiting for a pipe line to the railroad before doing much development work. All the land is being held under Government permits but a lease is expected shortly on the Wyoming Reserve Oil Co.'s lands, operated by Newlon and others. This permit has paid the Government $2,740 in royalties so far. It has two completed wells and one drilling at present.

A pipe line to the field would help out the producers and stimulate drilling, such a line would reach the railroad in about 30 miles and a 4-inch line would likely carry the production. A 4-inch line about 30 miles long would cost about $150,000. The initial investment would be paid for in about three years with the field making around 500 bbls. daily.

More Gas for Casper

The New York Oil Co. has completed a 12-inch line through Casper city to provide a high gas pressure on the east side of the city and also to carry gas from the main line to the east side of Casper in case the company extends its service eastward. A proposition to lay a gas line to Glenrock is being considered and the New York Co. will have an ample supply of gas when the new 70-mile line from Sand Draw is finished and as a reserve, the company will also have the gas from its gasoline plant at Teapot to draw upon. The Poison Spider line will be connected to the new line from Sand Draw this month if everything goes all right and the New York Co. is making arrangements for the carrying of the oil in other lines that is now coming through the Central Pipe Line Co.'s old line that the New York Co. took over last summer. This line was laid to carry oil and when the E. T. Williams Oil Co. started to dispose of its holdings in subsidary companies, the Central Pipe Line Co. was sold to the New York Oil Co. The latter company then built the Teapot gasoline plant which is about ready to start operating and the waste gas from the Teapot plant will be sent to Casper through this line. The contracts to ship oil through the line will be turned over to some other pipe line from Salt Creek when the New York Co. starts to ship gas through the former oil line and as the Illinois Pipe Line Co., the Midwest Refining Co. and the Producers & Refiners all have pipe lines from Salt Creek there is expected to be some sharp bidding for these contracts. Also the Sinclair pipe line could handle more crude than at present.

If negotiations prove successful, a pipe line from Casper to Glenrock will be laid from the 12-inch high pressure line on the east side of Casper and the Continental refinery at Glenrock will be supplied with gas by the New York Oil Co. The town of Glenrock will also be able to have the gas for domestic purposes.

Testing Mellen Dome

The Ohio Oil Co.'s well on the Mellen Dome, Section 13-29-82 is finishing setting casing at 1,942 feet and should reach the sands shortly; these are expected around 2,000 and 2,500 feet. The Mellen Dome is a wildcat structure, nothing ever having been drilled there before and the Ohio is considered as standing a good chance to bring in a new field. The Wall Creek and Dakota sands are the objectives.

A report that the Ohio Oil Co. and the Continental Oil Co., formerly the Mutual Oil Co., were at war with each other is discounted here. The report states that the two companies did not agree on pipe line charges, but there seems to be little foundation for this tale as the two firms have always been in accord since the Big Muddy Field was opened and the Ohio helped lay the first line there. The Continental uses the Illinois Pipe Line Co.'s lines wherever convenient and no friction has arisen through this use.

The Illinois Pipe Line Co. is a subsidiary of the Ohio Oil Co. and has pipe lines in many of the fields of this region. This company laid the first line into the Big Muddy Field, where the Continental Oil Co. has practically all the field production at present, and the Illinois also carries Salt Creek oil from that field to the Continental refinery at Glenrock through the Illinois' Salt Creek line and by reversing the flow of the Big Muddy line from the field to

(Continued on Page 151)

News from Fields of Canada

By Victor Lauriston

CHATHAM, Ont., Sept. 5.—In the Foremost Field, southern Alberta, production of Canadian Western Natural Gas Co.'s No. 6 gasser recently brought in, is much below that of No. 5 well brought in earlier in the year. Number 6 is good for 1,000,000 feet a day, compared with the production from No. 5 of 10,000,000 feet a day. Number 6 is down 2,208 feet and drilling is being continued although the company's geologists hold out little hope of a deeper oil-bearing or gas-bearing sand. A hard shell formation at 2,190 feet gave the gas production. The daily open flow production of the six gassers already drilled in the Foremost Field by the Canadian Western Natural Gas Co. is: No. 1, 17,500,000 feet; No. 2, 7,000,000 feet; No. 3, 1,000,000 feet; No. 4, 12,700,000 feet; No. 5, 10,000,000 feet; No. 6, 1,000,000 feet; an aggregate open flow production of 49,200,000 feet.

In the Turner Valley Field, Vulcan Oils, Ltd., drilling not far from the Royalite No. 4, struck an oil sand at 1,350 feet. About a barrel of light oil was bailed, and drilling has been continued, and is now down over 1,600 feet. The show at 1,350 feet has apparently no commercial significance; but would seem to indicate the well is about 150 feet higher on the structure than the Royalite No. 4.

Medicine Hat Field

In the Medicine Hat Field, Roth's No. 1 deep test at Police Point is reported down 810 feet with a 16-inch hole. Some trouble has been experienced in getting the necessary 16-inch casing, but a full string is now on hand.

In the Sweetgrass Field, southern Alberta, Urban Oils, Ltd., Moodie No. 1, Section 4-1-15w4 is down 1,750 feet and as there has been some trouble with caving, casing will be run before the well is drilled deeper. East of Coutts, Imperial Oil, Ltd., Dead Horse Coulee No. 2, a mile north of the Rogers-Imperial gasser on Section 29-1-11w4 is down 2,330 feet and has resumed drilling after setting a string of 8½-inch casing. The Dead Horse Coulee No. 2 is stated to be some 200 feet lower on the structure than the Rogers-Imperial, and should encounter the first gas sand with a few hundred feet more drilling. Imperial Oil, Ltd., Erickson Coulee, 25 miles east of Coutts, is rigging up with a steel derrick and heavy rotary outfit and will be spudded in some time this month. In the Montana fields, Queen City Oil Co. Moore No. 17 has been brought in with an estimated production of 40 bbls. a day.

Dr. K. A. Clark and S. M. Blair of the industrial research department of the University of Alberta have left for Waterways to study the extent, quality and variations of the Athabaska tar sand deposits with a view to commercial development. Earlier in the year an experimental plant at Runvegan yards was utilized to separate the crude oil from 500 tons of tar sand, the plant working with entire success. Samples of this separate crude were utilized for oiling experimental roadway on the St. Albert trail, a half mile being oiled with the separated product and another half mile with the asphaltic crude from the British Petroleums, Ltd., wells in the Irma-Wainwright Field.

New Gas Line

Following the application for a permit to construct a new gas line from the Turner Valley Field to Calgary, the Canadian Western Natural Gas Co. will shortly file with the Alberta Public Utilities Commission its proposed new rates for natural gas supplied to Calgary, Lethbridge and other points in southern Alberta. Natural gas is now being delivered to the new distribution system in North Lethbridge.

In the Ontario fields, in Norfolk County, Dominion Natural Gas Co. No. 6 in the Courtland Field is reported drilling around 800 feet; No. 7 is drilling between 400 and 500 feet. The Medina Natural Gas Co. test is running casing to 1,250 feet preparatory to drilling into the gas sand.

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MEN KNOWN IN OILDOM

Robert W. Clark

Robert W. Clark has been a consulting geologist at Okmulgee, Okla., for several years, and has aided in locating several of the pools in the Okmulgee district.

Mr. Clark was born and reared in Michigan and has degrees of A.B., M.A. and Ph.D. from the University of Michigan. He also took a special course of geology in the Universities of Munich and Heidelberg, in Germany, and taught geology for several years in the University of Michigan. Joining the geological staff of Cosden & Company at Tulsa in 1916, he was engaged in the study of oil and gas properties in Oklahoma and Kansas for two years before going to Okmulgee in 1918. He formed a partnership with C. Max Bauer in Okmulgee in 1919, which continued until Mr. Bauer became chief geologist of the Mid-Northern Oil Company of Montana in 1921. Mr. Clark has cooperated with the United States Geological Survey and the American Association of Petroleum Geologists in important work in Oklahoma, and is generally recognized as an authority in petroleum geological circles. He is a member of the American Association of Petroleum Geologists and of the Mineralogical Society of America, and is also a director of the Okmulgee District Oil and Gas Association and of the Okmulgee Geological Socity.

PERSONAL PARAGRAPHS

Russell Reinochl, of Casey, Ill., has gone to the Wyoming fields for the Ohio Oil Co.

* * *

James S. Reutt, independent operator, has moved from Okmulgee, Okla., to Cisco, Tex.

* * *

O. T. Dawson, of the National Supply Company in Oklahoma, has returned from a business trip to Chicago.

* * *

M. F. Moroney, oil operator, of Okmulgee, Okla., has returned after a summer's vacation spent in Michigan.

* * *

Roy Holloman, a geologist well known in the Rocky Mountain region, has opened an office in Denver, Colo.

* * *

John L. Brock, Jr., oil producer, of Okmulgee, Okla., has gone to Denver, Colo., where he will spend his vacation.

* * *

R. B. Pringle, vice president of the Waite Phillips Company, is spending his vacation with his family in Colorado.

* * *

James Barr, clerk in the executive department of the Gulf Production Company at Fort Worth, Tex., has just returned to his desk from a two weeks' vacation.

* * *

C. W. Horstmeier of the Sinclair Crude Oil Purchasing Company is in Los Angeles looking over the situation on the Coast.

* * *

R. W. Dallas, field manager of the Independent Oil Producers at Coalinga, Cal., was in Los Angeles recently on a short business trip.

* * *

W. N. Doss of the Standard Oil Company was in Los Angeles recently, but has returned to the company's refinery at Point Richmond, Cal.

* * *

T. G. Travis, assistant district sales manager of the Standard Oil Company at Spokane, has been transferred to Los Angeles in a similar capacity.

* * *

C. C. Laclare, special representative of the Plymouth Cordage Company, was calling on the oil trade and supply houses in Casper, Wyo., the past week.

* * *

A. B. Patterson, superintendent of operations for the Texas Production Company, with Denver headquarters, was in Casper, Wyo., several days recently.

* * *

H. F. Miller, of the Carter Oil Company, has returned to Tulsa, Okla., after a month's motor trip to his former home in New York City and points in the East.

* * *

C. W. Hanley of Wichita Falls, Tex., agent for the Gulf Production Company in Zone No. 7, left last week for his vacation. He will be away for several weeks.

* * *

Will C Mee, independent operator, of Okmulgee, Okla., will move to Cisco, Tex., for the winter months, and plans to operate in the shallow fields of that part of Texas.

* * *

H. A. Melat, head of the production department for the Gulf Production Company in North Texas, has just returned from an extended summer vacation spent in Colorado.

* * *

Fred Hyer of Fort Worth is in western Texas making arrangements for starting his wildcat in the southern part of Howard County. He expects to spud in the well this week.

* * *

B. W. Ludeman of Okmulgee, Okla., was a recent business visitor in Fort Worth, Tex. Mr. Ludeman has interests in the prospective oil producing districts of western Texas.

* * *

F. W. Fassett of Denver, Rocky Mountain representative for the Bovaird Supply Company of Bradford, Pa., has been spending some time in Casper, Wyo., calling on the oil trade.

* * *

Robert Garrison, chief petroleum field engineer of the Miley Oil Company, has just returned to Los Angeles from a two months' vacation, during which time he made a tour of the Northwest.

* * *

T. A. Morgan of Wichita, Kans., in charge of pipe lines for the White Eagle Oil & Refining Company, spent several days last week in Fort Worth and other points in the North Texas oil territory.

* * *

J. W. McCullough, formerly vice president of the Independent Oil & Gas Co., and now an individual operator, has returned from a vacation spent in Hawaii and California, and is at home in Okmulgee, Okla

* * *

J. A. Patton, vice president of the New Domain Oil & Gas Company, accompanied by Mr. Fowler, field manager for the same concern, with headquarters at Lexington, Ky., were in Bowling Green, Ky., last week.

* * *

Sullivan Kinney, who has been in charge of the Bowling Green, Ky., district for the Frick-Lindsay Supply Company, has been transferred to Owensboro, Ky., where he will have charge of the company's business.

* * *

L. A. Greene, W. M. Harrison and D. E. Little, all of Fort Worth, Tex., have just returned from the directors' meeting of the Texas Independent Oil Men's Association, held in El Paso. The annual convention of the association will be held in Houston in October.

* * *

H. C. George, director of the School of Petroleum Engineering at the University of Oklahoma, has returned to San Antonio, Tex., after spending most of the month of August in geological exploratory work in northern Mexico.

* * *

T. F. Thompson of the Union Oil Company, who has been manager of the company's operations at Tucson, Ariz., since 1919, has been transferred to Seattle, Wash., from which point he will direct work in Washington and Oregon.

* * *

Ralph C. Steinman, chief scout for the Sinclair Crude Oil Purchasing Company, has completed a week's inspection trip through the Smackover Field in Arkansas, and is once more at his desk in the Tulsa, Okla., offices of the company.

* * *

C. J. Barkdull, from the accounting offices of the Standard of Indiana in Chicago, and J. A. Carroll, Jr., from the accounting offices of the Midwest Refining Company at Denver, were in Casper, Wyo., during the past week on their annual inspection tour.

* * *

J. E. Carnahan of Canton, Ohio, of the Carnahan Refining Company at Creelsboro, Ky., and William Horn, of Marietta, Ohio, general manager of the Sure Oil & Gas Company, paid a visit to the Cumberland County, Kentucky, and Clay County, Tennessee Fields the past week.

* * *

D. J. Moran, vice president and manager of the production department of The Texas Company, Houston headquarters, has gone to New York for a conference with other executives of the company. Mr. Moran will then go to Cleveland, Ohio, and bring his family home. They have been spending the summer months there.

* * *

Charles Asdell, former manager for the Illinois National Supply Company in the Bowling Green district, has been transferred to Owensboro, Ky., to take charge of the new store recently opened by the National at Whitesville, Ky. James Nelson, formerly of Winchester, Ky., has been transferred to the Bowling Green district.

* * *

G. Jeffreys, consulting geologist, who has been in South America for a year doing geological work, has returned to his office in San Antonio. Mr. Jeffreys' firm is Jeffreys & Kuhlman, and Mr. Kuhlman has been in charge of the San Antonio office during Mr. Jeffreys' absence. Mr. Jeffreys will remain in San Antonio permanently, having completed his work in South America.

* * *

Harry P. Ferree, formerly a Casper, Wyo., resident and cashier of the Ohio Oil Co., is in Casper on a short visit from Denver. For the past three years Mr. Ferree has been with the Mutual and Continental Oil Company, with headquarters at Denver, Colo. He brought Mrs. Ferree and daughters with him, and the latter will stay in the Casper Mountains for a few weeks' vacation.

* * *

C. C. Blackman, of Port Arthur, Tex., has returned home following a six weeks' visit to the scenes of his youth in Clarion, Venango, and neighboring oil counties in Pennsylvania. Mr. Blackman celebrated his 80th birthday late in August. He was in charge of The Texas Company's refinery at West Dallas for many years, retiring about one year ago and moving to Port Arthur. He is one of the oldest refiners in the country and has kept pace with every development in that end of the industry. He became identified with the business in the days of the first activities along Oil Creek, going to the old Lima Field to take charge of a refinery when Ohio occupied the center of the stage as an oil State. He came to Texas in the early days of The Texas Company as one of the first refinery officials, remaining in that department until he retired voluntarily. Mr. Blackman is remarkably active physically, with a keen mentality that has always been one of his chief characteristics.

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Can be furnished either with triple, quadruple or quintuple sheaves, and either with or without guards. Can be furnished without spring attachment, if desired.

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Length Over All—7 Feet

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"Son, it took a long time to convince me that Steel Derricks were anything but the 'bunk' of some of these hi-falutin' efficiency experts. But, believe me, after workin' under an 'IDECO' steel derrick through some of the hardest drillin' I've ever done, I'm sold. It was some satisfyin' to know she would stand a lot of hard drillin' and swabbin' without fallin' in on my head.

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General Superintendent
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"Present day competition in the oil business requires that we equip our properties with permanent, durable production machinery. Wooden equipment has been proven the most extravagant item in the producing end of the oil business. Our auditor has shown me where the yearly cost of the wooden derrick, per well, is six times greater than by using an International Galvanized Steel Derrick.

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"Our plan will be to replace all wooden production derricks with 'IDECO' Galvanized pumping derricks. On future locations, this type of 'IDECO' Derrick, with removable reinforcings will be used for drilling and the inner unit left for production purposes after the well is in.

"I have received satisfactory reports from the foremen and field men who have had experience with these derricks. This company, beginning with this date, will standardize on International Steel Derricks and all purchases of same are hereby authorized."

Every day, Companies in all the Fields are being convinced, by Facts, that an International "IDECO" Steel Program is the most Economical course to follow. Write for full information.

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Columbus, Ohio **Torrance, Cal.**

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GALVANIZED

Steel Derricks

NATURAL GAS DEVELOPMENTS

Use of Gas Meters For Determination Of Oil Pay Strata

By C. V. Millikan

*Petroleum Technologist, Amerada Petroleum Corp., Tulsa, Okla.**

When a flowing oil well is being drilled in with cable tools, it is difficult to determine when an additional streak of pay sand is drilled By placing a gas meter on the gas-release line from the oil and gas separator, any increase in volume of gas that comes with oil production is recorded. In addition to the better knowledge of sand conditions, these data are a valuable aid in determining the size and depth of shots, plugging off water, and estimating ultimate production. The meter also gives a record of operation while the well is drilling in; and if allowed to remain on the well after completion will give information that may lead to a more efficient recovery of the oil from the sand.

A vertical cross section of any oil sand will show great variation in porosity and oil content. In some sands, the entire thickness contains oil, the variation being only the degree of porosity or oil content, but more often the pay streaks are distinctly separated by shells or barren streaks. These pay strata vary in number and may be thin or thick. The total thickness of the sand may be several tens of feet while the part containing oil may be only 1 or 2 feet thick. The amount of production is not proportional to the thickness of the pay streaks.

If the total thickness of the sand or the amount that can be drilled is small, or if the initial production is small, the depth at which each stratum of pay is encountered can be determined sufficiently accurately for all present economic purposes. However, when drilling through sand of considerable thickness, giving large initial production, especially where conditions necessitate that the production go through the same gas trap with that from one or more wells already producing, it is difficult to determine the depth at which the pay strata are encountered even accurately enough to guide the placing of shots, and small pay streaks are apt not to be recognized at all.

To determine more definitely sand conditions in wells being completed with cable tools, the Amerada Petroleum Corp. has measured the volume of gas produced with the oil while drilling in by placing a common orifice meter on the gas-release line from the oil and gas separator. Recently a Collins Pitot tube was substituted for the flange and orifice plate, with apparently just as accurate results. This installation is much less troublesome and cheaper than the flange and orifice plate; but has the disadvantage that it is not so easily adjusted. The same recording device is used, the only difference being the replacing of the flange and orifice plate with the Pitot tube.

All gas from the well is recorded by the meter except that absorbed in the oil going to the stock tanks, which is too small to affect any results obtained. The orifice meter is very sensitive and any change in the rate of flow of gas is recorded instantly. After the well starts flowing and another pay stratum is drilled into, there is an increase in the volume of gas recorded by the meter and a constantly increasing volume of gas is shown until the entire thickness of the pay streak is drilled, when it will show a contrast rate of flow again. By determining the depth of the well when the increase is first shown by the meter and again when the rate of flow again becomes constant, the thickness of each pay streak can be determined as accurately as the driller can determine the depth of the well and amount drilled.

*Before fall meeting of Petroleum Division. (Copyright, 1925, by the American Institute of Mining and Metallurgical Engineers, Inc.)

REDUCED GAS RATES AT COFFEYVILLE, KAN.

TOPEKA, Kans., Sept. 5.—The Kansas public service commission has made an order approving a reduction in the rates for natural gas for the city of Coffeyville. Donald Stewart, former assistant attorney general, now the attorney for the Coffeyville Gas Co., appeared before the commission with the proposal of the company to reduce rates.

The consumers of the city now pay a flat rate of 60 cents per 1,000 feet for gas. There is no service charge. The new rate makes a service charge of $1 a month and cuts the price of the gas to 45 cents per 1,000 feet.

On the basis of the company's business last year the new rate will cause an actual loss to the company. But it proposes to go extensively into the production on fuel gas this year and by increasing the volume, increase its profits. It was shown to the commission that the company actually will lose money under the new rate until it has increased the volume of business 10 per cent.

GAS BIDS AT HOUSTON FROM TWO COMPANIES

HOUSTON, Tex., Sept. 5.—Price contracts for natural gas offered to the city of Houston and the Houston Gas & Fuel Co. differ 5 cents. The Houston Pipe Line Co. quotes a price of 40 cents per 1,000 feet, and the Houston Gulf Gas Co. a price of 35 cents per 1,000 feet. These prices pertain to gas delivered to the fuel company. The fuel company would then run it through its pipes to the homes over the city at 75 to 85 cents per 1,000 feet, it was said.

The city council will act on all contracts, and public hearings will be held before any final action is taken, Mayor Holcombe said. The pipe line company asks if its offer is accepted, that it be for a term of from five to ten years.

Domestic consumers would get preference in use of the natural gas, the pipe line company contract stipulates. Both the Gulf and Pipe Line Co. have made arrangements to pipe the gas to Houston.

SECOND GAS PIPE LINE FOR EMPIRE COMPANIES

BARTLESVILLE, Okla., Sept. 5.—Contract for their second gas pipe line, from Wichita to Valley Center, Kans., has been let by the Empire Companies to Truman & Rayle of El Dorado. The line will cost approximately $125,000 and will provide additional facilities for serving Hutchinson, Newton and the several smaller cities now connected to the 10-inch line. The new line will be 14½ miles long and constructed of 8 and 10-inch pipe. At Wichita, connection will be made to the new 16-inch line recently completed from the Kay this month the Rainbow Bend Field con-County gas fields.

The contractors will complete early nection they are building for the Empire Companies, and will then move to the new job. Its completion should be early in October.

PIPE SHIPMENTS EN ROUTE

HOUSTON, Tex., Sept. 5.—First shipments of pipe from the Youngtown Sheet & Tube Co., for the Houston Gulf Gas Co.'s pipe line to Houston are moving to the Refugio gas field and Markham. Two construction gangs are on the way to begin work at both places.

SAN ANTONIO GETTING LIVE OAK FIELD GAS

HOUSTON, Tex., Sept. 5.—The Houston Oil Co. is now delivering gas from its wells on the Cartwright ranch in Live Oak County to the Southern Natural Gas Co. which supplies San Antonio. The arrangement will continue until the Southern Natural Gas Co. completes the lines into the Webb County Fields now being laid.

The Southern's extension to the southern part of Live Oak County to wells of the Plateau Oil Co. passes within a few miles of the Houston Oil Co.'s Cartwright wells and connection has been made to the Southern's line. While the first wells drilled by the Plateau Oil Co. and Texas Pacific Coal & Oil Co. operating jointly in southern Live Oak County furnished a big volume of gas when brought in some months ago; they have been dead for several weeks. It is still believed there is a lot of gas in that district. Southern Natural Gas Co. built a 40-mile extension of its line to the wells. The first wells are to be abandoned in all probability but additional wells will be drilled.

Houston Gulf Gas Co. (Seagraves-Moody) is now engaged in doing geological work on the 40,000-acre block of leases in McMullen County which it secured from the Grubstake Investment Association and on which the first gas was discovered which later led to the building of the Southern Natural Gas Co.'s line. As soon as the geological work is completed locations will be made for several tests to develope additional gas there. Only one sand, that at 873 feet, has thus far been developed and the few wells drilled to it are now giving up but little gas.

The Houston Oil Co. has now has 8 wells shut in in Live Oak County, each estimated at 25,000,000 feet capacity and four in Refugio County. The estimated guage of these is 60,000,000 feet each. The company, through a subsidiary, the Houston Pipe Line Co., plans to be delivering gas to the Houston ship channel industries by December 1. The combined capacity of the wells in Live Oak and Refugio Counties is estimated at 500,000,000 feet per day, open flow, which is considered ample for present needs. The 160 miles of line from Live Oak County to Gulf, Matagorda County, are now being tested. Gas will be delivered to the plant of the Texas-Gulf Sulphur Co. at Gulf during the coming week. A branch line is being laid from the gas district in Refugio County which will connect with the main line at Goliad.

LONE STAR TO GET GAS FROM GRADY COUNTY

OKLAHOMA CITY, Okla., Sept. 5.—The Lone Star Gas Co. of Texas will soon begin receiving gas from the Grady County Field, through a pipe line belonging to Briscoe & Hall, and thereby becomes the most important competitor in that territory of the Oklahoma Natural Gas Co. The new Briscoe & Hall 14-inch line is being laid from the gas field to Gas City, southwest of Duncan, where delivery will be made to the Lone Star trunk line that runs into Texas. It will be completed before winter.

Sixty wells are producing gas in the Grady County Field and they have a total daily production of about 700,000,000 feet. The gas sand is 40 to 60 feet thick and the average well production ranges from 10,000,000 to 45,000,000 feet. The contract sale price is 10 cents per 1,000 feet. During the spring and summer about 1 per cent of the production has been used. Producers estimate that shortly 2 to 3 per cent will be used and that increased demands in the winter may run it to 10 to 15 per cent.

The new pipe line will have a daily capacity of 60,000,000 feet and will cost about $750,000. It is understood the Lone Star Co. has contracted for all the gas carried and that most of it will be delivered into the company's interstate line for distribution in North Texas. Two other lines beside that of the Oklahoma Natural take gas from the field. The Chickasha Gas & Electric Co. has a 4-inch line into Chickasha and a smaller one leads to Cyril and serves the Anderson-Pritchard refinery.

Twenty-four wells have been drilled in the field by George W. Stogner of Oklahoma City, one of the discoverers of the pool. Four of these were for the Oklahoma Natural Gas Co.

WILD GASSERS CAPPED IN ARKANSAS FIELDS

LITTLE ROCK, Ark., Sept. 5.—Efforts to enforce the conservation laws regarding oil and gas, to insure long life of the Arkansas fields, are beginning to bear fruit and soon it is hoped to have all of the rules obeyed throughout the oil district, Commissioner of Conservation and Inspection Perry F. Chappell said in discussing the situation in the oil fields.

The two conservation agents in the fields—stationed at El Dorado and Camden—have reported to the commissioner that through the efforts of the department and the advisory board with the larger operators of the district, 13 wild wells that had been blowing 525,000,000 feet of gas into the air daily have been closed during August. Two more wild wells will be closed soon.

The serious situation which developed in the field for a time several weeks ago, when defective casings in wells drilled into the third sand and encountering rock pressure of as high as 1,500 feet began causing nearby wells to shoot salt water and to crater, has been remedied, the agents report. They also reported that as the drillers begin to obtain a better understanding of the situation regarding the third sand, less trouble is being encountered in controling the enormous pressure.

With the wells under control and cooperation of the larger operators assured, the next step is expected to be strict enforcement of the law requiring logs of wells to be filed with the commissioner within 10 days after completion. Most of the drillers file these logs promptly but in some instances they are not sent in until asked for. It is probable that the commissioner soon will require that all be filed promptly and in cases where they are not so filed the penalties provided by law will be inflicted.

The use of natural gas to blow oil out of the ground, changing pumping wells into gushers for a short time, has been virtually stopped, the commissioner said. He said that it was possible that a few wells in which this is being done had not yet been discovered but he expressed the belief that all of this soon would be stopped.

A. B. MACBETH HONORED

LOS ANGELES, Cal., Sept. 5.—A. B. Macbeth, executive vice president of the Southern California Gas Co, has been nominated as vice president of the American Gas Association following a meeting of the nominating committee of the association The election will be held during the convention of the association in Atlantic City in October. Mr. Macbeth is a member of the executive committee of the Union Oil Co. He is well known throughout the gas industry, serving at one time as president of the natural gas industry.

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EQUIPMENT AND SUPPLIES

OIL TREATING TESTS IN WYOMING FIELD

CASPER, Wyo., Sept. 5.—The firm handling Tretolite is making extensive experiments in the Wyoming oil fields with emulsions and b. s. oils that are attracting attention here. Emulsions formerly wasted, and even some supposed to be devoid of oil, are being treated and are turning into pipe line oil.

Some wells in the Lance Creek Field proved a great surprise after treatment. The Lance Creek Field produces some of the highest gravity oil found in this region, but for some time some of the wells have been sending out a white stuff that puzzled the pumpers. One worker on a lease there put this white stuff into a tank, and after a period it was discovered that crude had settled and a considerable quantity of oil was on top of the fluid. Examination disclosed that this white fluid coming from the Lance Creek wells was a reversal of the emulsions in this region, which are usually a mixture of water with the oil. In Lance Creek, the mixture is reversed and the oil is mixed with the water, turning the whole into a white fluid that resembles neither water nor oil.

The same firm is also using the process on the heavy oils in the black oil fields with excellent results. At the Dallas and Derby Fields in the black oil district south of Lander, Wyo., chemicals separated the water from the heavy bottoms that are usually considered a total loss to the producer, and the recovered crude was good pipe line oil.

The experiments mean that the black oil producers, and some of the light oil producers, of the Rocky Mountain region have been throwing away considerable quantities of bottoms and emulsions that would have made good pipe line oil if treated. Another point brought out is that much of the crude of this region that is reduced in price because of heating to remove the contained water, can be treated to save the loss sustained by the heating process, and thus save the producer the cost of heating and the fine imposed by the pipe line companies. This would prove especially valuable in some fields where the heavier oils are heated to a high point by burning some of the crude in the heaters.

SOUTHWEST SUPPLY CO. MAKES ANNOUNCEMENT

Announcement has been made of the organization of The Southwest Supply Co., and that it will handle products of the following manufacturers: Spang, Chalfant & Co., oil field tubular products; Standard Seamless Tube Co., seamless steel pipe; Wheeling Steel Corp., oil field tubular products; A. M. Byers & Co., wrought iron pipe; A. O. Smith, Corp., steel couplings; Hooven & Allison Co., Manila cordage; Larkin Packer Co., casing shoes, clamps, packers, and Bartlesville Supply Co., casing shoes, steel nipples.

General offices of the company will be located at Bartlesville, Okla., with branch offices as follows: Atlas Building, Tulsa; W. T. Waggoner Building, Fort Worth; 1111 North Main Street, Houston, Tex.; Railway Exchange Building, St. Louis, Mo., and Oliver Building, Pittsburgh, Pa.

Those connected with the company include John G. Phillips, John A. Bell, Jr., W. D. Reynolds, and Morvin Thomas.

BIG PAINT CONTRACT

Walter Davis of the Detroit Graphite Co. reports that a contract has been made by his company with the Continental Oil Co. of Denver, for aluminum paint for the entire plant of the Sapulpa Refining Co. at Sapulpa, Okla.

PRICES ON OIL COUNTRY GOODS HELD; PIPE MILLS LEADING IN ACTIVITY

By B. E. V. Luty

PITTSBURGH, Pa., Sept. 7.—Line pipe business now on the books of pipe mills is such as to insure production of line pipe at the present rate through October, with diminishing shipments in November to complete the larger orders. There has been no line pipe buying of consequence in the past fortnight and there is little inquiry now, but it is likely there will be some orders from time to time for short lines, such as can still be laid before very unfavorable weather comes.

Buying of casing, tubing, drill pipe and other well supplies has continued practically at the very high rate of June and July, but is now showing signs of diminishing, on account of the season and the less favorable oil statistics.

Demand for merchant pipe has continued to keep up a steady gait, which is really a very fair one, although it does not fill the butt weld departments of the mills, which have been having approximately an 80 per cent operation, as an average of all the mills, while practically all lap weld departments have been running full, with the exception, for some time past, of lap weld furnaces in the two plants in the city of Pittsburgh of the leading interest. These have always been regarded as sort of reserve capacity and this is still more the case now that the new Gary plant has got up to a fairly large production, though it is still far from attaining its full contemplated capacity.

Pipe Mills Most Active

The condition remains that the pipe mills are decidedly more active than the steel industry as a whole. In steel generally there has been little if any further increase in operations in the past fortnight, but there was a few per cent increase late in July and in the early part of August. July marked a turning point in the rate of mill operation, and production of steel in general is now 5 to 10 per cent above the rate in July.

Except for construction material, which necessarily must be bought ahead, buying of steel right along has been of hand to mouth character, and as such surplus stocks as buyers may have had were liquidated long ago, the buying makes quite a close measure of the actual rate of consumption. All the important steel consuming lines are running fairly well or very well, with the exception of the freight car shops, which have now run nearly altogether out of work, and there is no particular indication that there will be much fresh freight car buying in the near future. The other steel consuming lines cannot be expected to do much better than they have been doing.

Thus no large increase over the present rate of steel mill operation is to be expected. With the recent slight gain, the industry has probably struck its gait, approximately, until late in the year. Usually there is a slowing down in December, but from present prospects this would merely be seasonal, and as long as present underlying conditions continue, as to business in general, the steel industry is likely to run along much as it is doing at present.

Prices Steady

On the whole, finished steel prices are showing neither advancing nor softening tendency. In pipe, rails and tin plate there has been no change for a long time. Prices on merchant pipe and oil country goods have been held regidly by mills. Merchant bars have been steady and firm for several months, despite a recent report to the contrary, at 2.00 cents, f.o.b. mill Pittsburgh district, for the general Pittsburgh area. Sheets have firmed up a trifle, while plates have had a little weakening in the past few weeks.

Pig iron continues dull, with prices unchanged, and predictions that prices will advance on the next buying activity.

Connellsville furnace coke has been bought in many small lots in the past three weeks by Eastern buyers, both regular consumers and some who wanted an anthracite substitute, and the market has gone up, being now quotable at $3.35 to $3.65. Spot foundry coke is up 25 cents, at $4.00 to $4.50. These prices are per net ton, f.o.b. Connellsville ovens.

CATALOG DESCRIBES VALUES

The Merrill Co. of San Francisco, which operates the Merco Nordstrom Valves Co., has printed a catalog on Merco Nordstrom Plug Valves. It is complete and contains special instructions for the use and care of the valves. It gives detailed information about the various kind of metal valves made by the company including aluminum, bronze, mercoloy, and hard lead plug valves.

The mercoloy valves are made of a nickel bronze of especially high acid-resisting properties that has been developed by this company. The material has a tensile strength of over 60,000 pounds and an extremely high elastic limit.

APPOINTS DISTRIBUTORS

The American Cable Co. has appointed the firm of Brutons, Musselburg, to handle its general line, including wire rope and fittings, in Scotland. The Dominion Wire Rope Co., Montreal, is a new Canadian distributor. Other new distributors are: The Marion Machine, Foundry & Supply Co., Marion, Ind.; J. Shuman Hower, 106 Foster Bldg., Utica, N. Y.; The Contractors Equipment Co., 8 Steuben Street, Albany, N. Y., and John C. Louis, 221 South Eutaw Street, Baltimore, Md.

BOOKLET IN "ROTO"

The M. B. Skinner Co. of Chicago, has printed in roto gravure a booklet showing the operation of the tools manufactured by it. Illustrations of service saddles, pipe joint clamps and reseating tools are contained within its pages, and the fact that the booklet is done in "roto" is an unusual feature in advertising of this character.

ARTICLES ON PIPE WELDING

The August number of Oxy-Acetylene Tips, the house organ of the Linde Air Products Co., contains a lengthy and interesting article upon the use of welding tools on pipe line work. The article is perfectly illustrated and shows the work being performed upon the scene of the pipe laying activities.

LANDIS CO. NAMES AGENT

The Landis Machine Co., Victor Plant, Waynesboro, Pa., announce the agreement of the following agents: The Chadwick Co., 549 West Washington Boulevard, Chicago, Ill., for the States of Illinois, Wisconsin, Iowa and northern Indiana; A. J. Vaughn, machinery expedition and sales department; Bourse, Philadelphia, Pa., for eastern Pennsylvania, New Jersey and Delaware; William H. Harvey, 225 Denison Building, Syracuse, N. Y., for Syracuse, Rochester and central New York.

DRILLING MACHINE CO. OPENS TEXAS BRANCH

The Star Drilling Machine Co., Akron, Ohio, opened a new branch at Wichita Falls, Tex., September 1. Heretofore the North Texas oil fields have been served by the company's Chanute, Kans., branch factory. The increasing number of Star machines in North Texas has made desirable a nearby distributing point.

The new branch carries a complete stock of Star machines, repair parts,

Harry J. Larrick

drilling tools and cordage. It is under the supervision of District Manager Harry J. Larrick, who has made the four-cylinder gasoline motor Star Super-Tractors a big factor in the North Texas fields. Mr. Larrick is an expert on drilling machinery and is well known in the Mid-Continent Field.

A. W. Johnson will work out of the Wichita Falls branch as sales engineer. C. A. Ahlers from the Akron office has been appointed store manager.

BOOKLET LIKE BOMB

A novel booklet has been issued by the Zero Hour Torpedo Co. of Casper, Wyo., makers of the Zero Hour electric bomb for oil well shooting. The booklet is made in the shape of the bomb and its inside pages are designed as the inner works of the bomb. It gives a complete understanding of the function of the bomb at a glance.

SHIPS FOREIGN ORDER

The Safety Pulling Machine Co. of Independence, Kans., has shipped 10 of its deep pulling machines abroad.

TURBINE BLOWER BULLETIN

The L. J. Wing Manufacturing Co. has just issued a new 32-page bulletin, No. 77, on its turbine blowers. This bulletin is considerably larger than the previous one, containing much new and interesting data relative to the application of these blowers to stokers and graphical representation of their use for hand-fired boilers.

OPERATING AT CAPACITY

The Chicago-Wilcox Manufacturing Co. is operating at capacity at its new plant in Chicago. This company is the amalgamation of The Chicago Gasket Co. and the Wilcox Manufacturing Co. It is now able to meet the need for every form and type of gasket, washer and shim, as well as for the Wilcox Gasket. The new plant has a capacity much greater than the combined capacity of the former two companies.

Encyclopedia

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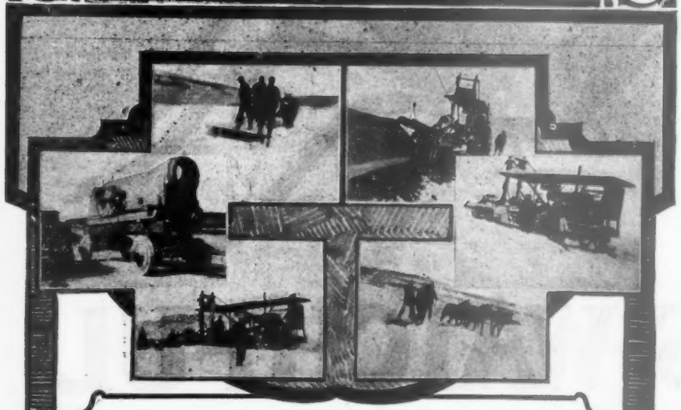

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JAPAN FEELS KEENLY LACK OF OIL; PRODUCTION DECLINING SINCE 1916

By Arthur Huber Redfield
Assistant Geologist, U. S. Geological Survey

From the Japanese standpoint it is highly unfortunate that Japan's shortage of petroleum should be made manifest just at that period of the world's history when the competition for petroleum, both mined and unmined, is keenest. The World War showed how vital a necessity is petroleum both for war and for peace. Marshal Foch is quoted as saying, "A drop of gasoline is worth in war a drop of blood;" and the statement is often repeated as a truism. Modern armies fight in tanks, fly in airplanes, and travel by automobiles and trucks, all consuming gasoline. Modern navies and merchant vessels are propelled in increasing numbers by engines that burn fuel oil. The machinery of modern industry requires millions of gallons of lubricating oils. This period of the world's history may well be called the Age of Petroleum.

Japan has never been a large producer of petroleum. Production, which began in 1875, yielded only 61,817 bbls. in 1890; about 870,548 bbls. in 1900; 1,825,098 bbls. in 1910; and 2,942,722 bbls. in 1916; but only about 1,947,000 bbls. in 1924. To the world production of crude petroleum Japan contributed only 0.2 per cent in 1924. Her total contribution to the world's production from 1875 to 1924 has been only 49,000,000 bbls., or 0.4 per cent of all oil produced in the world from 1875 to 1924. Among the countries of the Orient, Japan stands a poor fourth in production. Whereas the Dutch East Indies and Persia each export annually several million barrels of crude and refined oil, Japan must import considerable quantities of petroleum.

The climax of production was reached in 1916, when 2,942,722 bbls. was produced. Since that year the output of crude petroleum in Japan has shown a progressive decline. The falling off in crude oil production since 1916 was at first attributed to the stoppage in the importation of well drilling machinery and supplies. Since the ban on the importation of these articles was removed in 1919, the expected increase in production has not been realized. This decline, occurring at a time in the world's history when the competition for supplies of petroleum, both mined and unmined, is at its keenest, has occasioned grave and ill-concealed concern on the part of the Japanese oil industry and the Japanese Government.

Japanese Crude Deficient

The Japanese crude oils are inadequate not only in quantity but in quality. They are for the most part heavy oils with an average density of 25 degrees A.P.I. (specific gravity 0.903), deficient in gasoline and benzine. The refineries are able to maintain their output of these lighter fractions only by distilling large quantities of imported crude.

About two-fifths of the refined oils, waxes, greases, and bitumens consumed in Japan are imported chiefly from the United States and the Dutch East Indies. For many years the Japanese petroleum industry has striven to free itself from the competition of these foreign refined oils. Crude petroleum has been imported from the United States and the Dutch East Indies to be refined in Japan. This policy was apparently successful down to 1917 or even to 1918; the Japanese press could point triumphantly to the increase over pre-war days in the proportion of refined oils furnished by the domestic refineries. But in 1918 the decrease in the production of crude petroleum was becoming obvious; the two succeeding years brought a still more diminished output of crude. Imports of crude oil to eke out the declining domestic supply promptly jumped in 1919 to double the 1918 figure, and in 1920 exceeded the pre-war level. Still the output of the Japanese refineries decreased progressively from the peak of production in 1917.

At the same time the growth in the manufacturing industries and the higher standards of comfort have caused an increase in the consumption of refined oils from 2,990,000 bbls. a year before the World War to 3,284,000 bbls. a year since the yar. The shortage had to be made up by increased imports of refined oils. Moreover, the consumption of gasoline and benzine has increased at the expense of kerosene, which was formerly the chief mineral consumed. As the Japanese crude oil is deficient in these lighter fractions, this has caused an increased dependence on the importation of higher grade foreign crude.

Supply a National Problem

The problem of a petroleum supply soon forced itself on the attention of the political and commercial leaders of Japan. The government at the end of 1921 adopted a comprehensive program of its future petroleum policy, which embraces the following points: Investigation of the yet unexplored oil fields of Japan and her colonies; modernization of the industry of the already explored fields; furtherance of work of investigation and prospecting of the unexplored oil fields, especially by financial support; study for the purpose of creating substitute fuels; investigation of the economic utilization of fuels; increase of the import duties on petroleum products; methods of control of oil production; obtaining of foreign oil fields; increasing the importation of crude oil. So far as regards the development of her own oil production, the program can hardly secure a real improvement; only in Sakhalin, according to previous prospecting work, do very favorable prospects occur, and these indeed in the northern or Russian part of the island, which has been occupied by the Japanese only since the Russian revolution. Japan's efforts to bring under Japanese control promising oil fields in the Djambi district of Netherlands India have so far miscarried.

The search for new supplies of crude oil began in the Japanese islands, extended to the Japanese dominions, and finally to foreign countries. No important new fields have been discovered in Japan proper. Drilling in Taiwan (Formosa) has been disappointing. Karafuto (Japanese Sakhalin) apparently offers little hope of productive oil fields. Japan's best opportunities for obtaing new supplies of mineral oil appear to lie outside Japanese territory, in northern or Russian Sakhalin and in Manchuria. In northern Sakhalin petroleum has been obtained, but production is not yet on a commercial basis. In Manchuria preparations are being made to distill abundant and easily accessible beds of moderately rich oil shale.

Geology of the Oil Fields

The principal oil-yielding belts in Japan are almost parallel to the cost of the Sea of Japan, with some interruptions, from latitude 45 degrees, 30 minutes north southward to latitude 37 degrees north. On the southern or Pacific Coast a little oil has been produced between Suruga and Ise bays.

Petroleum has been found in Japan only in the Miocene and Pliocene series of the upper Tertiary. These series have been studied in detail by many geologists, and it clear that, although there are certain different peculiarities in the oil-bearing strata in the various districts, they have, on the whole, similar characteristics and are of the same geological horizon.

The oil-bearing strata consist of sandstone, tuff and fractured shale, in which oil is found associated with salt water. There are many oil-bearing formations, of which the most productive are the middle and lower divisions of the upper Tertiary, of Miocene age. In these the sandstone and tuff are the chief oil car-

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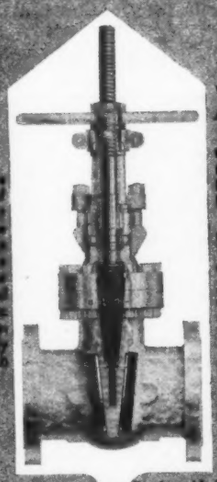
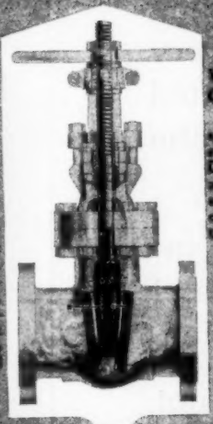
IN THE NEW DESIGNS OF LUNKENHEIMER IRON BODY GATE VALVES



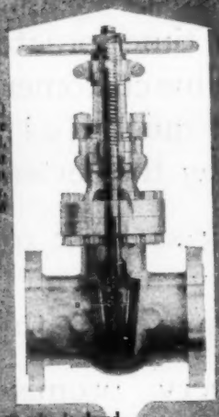
Valve Almost Closed

At this point the tendency for the disc to wobble increases. No wobbling in the Lunkenheimer design—clearance between ribs (A) and grooves (B) is so small and accurately gauged that pressure from either side cannot force disc against opposite seat. Thrust of disc is always against guides, and not against seating surfaces. Disc cannot drag on seats or touch them until valve is closed.



Valve Closes Tightly

And the ribs (A) and grooves (B) are still fully engaged. Disc rides straight and true to its seat and closes instantly, completely cutting off the flow.



Above views illustrate how disc is guided in its travel, and show why disc cannot drag on seats or touch them until valve is closed.

Other Outstanding Features

Face to Face Dimensions — Standard Trade Practice.

Heavy Bronze Seat Rings. Rings seat against solid walls of valve body—do not depend on a small flange to effect a joint with body.

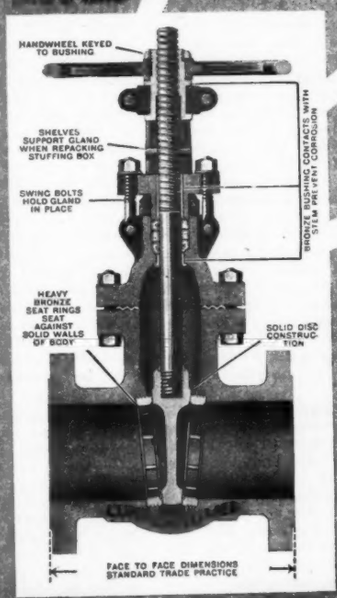
Solid Bronze Disc in sizes up to 6-inch; iron disc with bronze faces in 7-inch and larger sizes.

Bronze Bushing Contacts with Stem through yoke, gland and stuffing box prevent corrodible contact with iron parts of valve.

Swing Bolts hold gland in place; entire removal of nuts unnecessary to raise gland.

Two Shelves cast within yoke arms support gland when repacking stuffing box.

Interchangeability in the highest degree has been attained. All parts are renewable, including the seats and disc. Any replacement part will be exactly the same size as that which is to be renewed.


HANDWHEEL KEYED TO BUSHING
SHELVES SUPPORT GLAND WHEN REPACKING STUFFING BOX
SWING BOLTS HOLD GLAND IN PLACE
BRONZE BUSHING CONTACTS WITH STEM THROUGH YOKE, GLAND AND STUFFING BOX
HEAVY BRONZE SEAT RINGS SEAT AGAINST SOLID WALLS OF BODY
SOLID DISC CONSTRUCTION
FACE TO FACE DIMENSIONS STANDARD TRADE PRACTICE

Lunkenheimer Iron Body Gate Valves are made in the Standard Pattern, 125 lb. W.S.P. 2 to 24 in.; Heavy, 175 lb. W.S.P. 2 to 16 in.; Extra Heavy, 250 lb. W.S.P. 1½ to 18 in.

Correct design, careful selection of materials and skilled workmanship combine to produce this, the highest development in gate valve construction.

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Being so close to the oil industry, we can understand and appreciate this condition.

Delivery promises do not pump oil.

Overtime, night-work, Saturday afternoons and Sundays—Every resource we possessed has, many times, been thrown into the completion of an order to save our customer loss or embarrassment.

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riers, though some oil is obtained from the shale.

As regards the origin of oil in the oil fields of Japan, opinions of the Japanese geologists and chemists vary greatly, but it is accepted by all that oil is of organic origin, and had its origin in the Tertiary sedimentary rocks. The black or dark gray shales that are so widely found in the Tertiary formations, especially in the middle Tertiary, contain much organic matter, and in or near them are found bituminous substances and rich oil pools. These facts suggest that the oils originated in the black or dark gray shales.

The richer accumulations of oil occur, without exception, on anticlinal, domal, or terrace structures. The developed oil fields are all on anticlinal ridges. Clements suggests that in the future new oil fields may be developed on minor folds in some of these broad plains that lie between the ridges, but as there is no surface guide in the closely cultivated plains as to the structure of the subsoil, it may be some time before operators will venture to drill in them.

Four Producing Districts

In Japan proper there are four producing districts. Three of these are on the island of Honshu; the Echigo district, in the Prefectures of Niigata and Nagano; the Akita district, in the Prefectures of Akita and Yamagata; the Totomi district, in the Prefectures of Shizuoka and Aichi. The other is the Hokushu district, in the Prefecture of Sapporo, on the island of Hokushu (Hokkaido or Yezo).

New Drilling

In an effort to extend the oil-producing area of Echigo to the north, the Murakima Field in the northern part of the Prefecture of Niigata has been prospected. The Tertiary beds are folded into two anticlines and three synclines and cut by six faults, all trending north-south or north-northeast-south-southwest. In the main part of the field five wells were drilled by both cable and bamboo spring-pole systems to depths ranging from 66 to 836 feet. In the southern or Nakajo portion of the field are many dry holes, of which the deepest struck the underlying granite at a depth of 1,333 feet. In the nearby Haguro Field about 40 wells drilled by the cable system to depths varying between 330 and 1,351 feet have yielded only small quantities of oil.

In density the oil won in the Echigo district ranges from less than 15 degress to 45 degrees A. P. I. (specific gravity 0.9659 to 0.8017). The heavier oils occur in the higher strata. Oils from the Kubiki black shale, as at Kubiki and Amaze, have an average density of 40 degrees A. P. I. (specific gravity 0.8251) and those from the middle sandy shale, as at Niitsu and Ushirodani, have a density varying from 15 degrees to 20 degrees A. P. I. (specific gravity 0.8659 to 0.934). In the same field or even in the same wells, oils from the lower formations are of higher grade than those from the upper, as at Miyagawa and Nagamine-Kamada. Where igneous rock has been intruded into the oil-bearing strata, the oil in many places is thick and heavy with a density less than 10 degrees A. P. I. (specific gravity 1.000).

The oils belong mainly to the naphthene series, and resemble the oils of the Baku district. Some of the Echigo oils contain small percentages of the paraffin hydrocarbons. In the refineries of Niigata Prefecture the domestic crudes yield an average of 4.8 per cent gasoline, 31.4 per cent kerosene, 31.5 per cent solar oil, 13 per cent fuel oil, 17.6 per cent lubricating oils, 0.1 per cent paraffin, and 1.6 per cent pitch.

Akita District

In the Prefectures of Akita, Yamagata and Aomori, in the northwest part of Honshu, the oil fields parallel the coast line for about 20 miles. The surface of the oil districts is occupied by hills or low mountains not more than 1,000 feet in height which have a general northeasterly trend. These hills and mountain ranges usually coincide with the anticlinal folds in Tertiary strata, and the valleys between them are mostly synclinal.

Oil on Anticlines or Domes

Accumulations of oil occur only on anticlinal or domal structures. The strata in most places are generally folded along north-northeast-south-southwest lines, with dips not exceeding 30 degrees. The producing fields lie north and south of Akita city. The Kurokawa oil field, 9 miles north of Akita city, famous for a gusher that produced 10,000 bbls. a day, is situated on an elongated dome on which the inclination of the strata averages 20 degrees. The Toyokawa oil field is on a terrace, and the oil occurs in fractured zones of the black shale. The Michikawa oil field, 5 miles north of Akita city, is in the gray shale, which forms an elongated north-trending dome.

From 2 to 20 miles south of Akita city extends the Kameda Field. Here the Tertiary beds are folded and faulted along north-south lines. The principal structures of interest are the Kimiganogawa anticline; the anticline east of Uchimichikawa; the anticline near Katte; the Katsurane Dome; and the anticline at Toyoiwa. Oil is produced commercially from the Uchimichikawa, Katte, and Katsurane anticlines.

Efforts to extend the Akita fields to the south and southeast by drilling have not yet been successful. In the Wada Field, 6 miles southeast, four wells have been drilled, two by the native bamboo spring-pole system, and two by the cable system, to depths ranging from 1,340 to 1,560 feet, without success.

In the eastern part of the field, since 1916, six test wells have been put down without success, three by the cable-tool system to depths of 922 to 1,145 feet, and three by the native bamboo spring-pole system to depths of 241 to 305 feet.

In the southern part of Akita Prefecture, two test wells are now being drilled, one by the cable-tool system and one by the native bamboo spring-pole system.

Lack of Success

A similar lack of success has so far met all efforts to extend the Akita fields to the north and northwest. On the Oga Peninsula, northwest of the city of Akita, lies the Ogashima Field. From 1915 to 1917 four wells were drilled, two by the cable system and two by the native bamboo spring-pole system, to depths of 886 to 1,574 feet, without result. Three wells drilled on the Kanaoka anticline, west of Onozawa, in 1916-1919 were unsuccessful. On the Tomine anticline, a well was drilled in 1917-1919 by the cable-tool system to a depth of 1,308 feet, without result. On the Nigorigawa anticline a well drilled in 1920 by the cable method to a depth of 582 feet yielded 10 bbls. of oil daily. Two wells by the native bamboo spring-pole system yielded each 1 bbl. a day of asphaltic oil of 14 degrees A. P. I. density at depths of 612 and 642 feet. A well drilled by a cable rig 1 mile to the south gave only a small quantity of oil at a depth of 870 feet. On the Nagaomote anticline, three wells were drilled in 1919-1920 by the cable tool methods to depths ranging 464 to 1,594 feet, but proved unsuccessful.

At Futatsui, from 1916 to 1922, five wells were drilled, four by the cable system and one by the rotary system, to depths ranging from 1,000 to 3,510 feet, but without success.

East of Futatsui, from 1916 to 1922, six wells were sunk in the villages of Ochiai, Shimo-Ono, Nanakura, and Fujikoto, two dug by hand and four by the native bamboo spring-pole system, but without result. A well is being drilled by the cable system at Shimo-Ono.

A little production (300 bbls. a year) is obtained from shallow wells in the Prefecture of Yamagata. Drilling on the Takino-sawa Dome, in the center of the field, by the Japanese spring-pole system in 1923 revealed traces of oil and gas at a depth of 364 feet. The Hanezawa Dome was drilled to a depth of 1,776 feet by the cable system, and the Tano-sawa Dome to a depth of 889 feet

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by the bamboo spring-pole system, without result.

Little Oil Found in Aomori

Very little oil has been obtained in the Prefecture of Aomori. In the Daishaka Field, a number of shallow wells have been drilled in the last 35 years down to the Pliocene without success. At Yoshinoda a well drilled by the cable and rotary systems to a depth of 3,240 feet found slight indications of oil in the upper part of the Miocene. At Masdanome, wells drilled on the west flank of the Umanokami-yama anticline obtained only a small production of petroleum.

Although a little oil had been produced in the Akita district for several years, its sudden rise as a producer dates from the opening of the Kurokawa gusher in May, 1914, with an initial production of 12,000 bbls. daily. The discovery of the Toyokawa and Michikawa pools increased the yield of the district until in 1921 it exceeded the production of the Echigo district. In 1922 the Akita district produced 44 per cent of the total output of Japan.

Gushers Short Lived

A number of gushers have been struck in the Akita district, several of which yielded 10,000 to 12,000 bbls. a day when the wells were first brought in. But the gas pressure soon decreases, and after a flow of several months the well generally has to be pumped. Water is very troublesome, and difficult and expensive to control.

The crude oil of the Akita district has an asphaltic base, is brown in color and averages in density 22.80 degrees A. P. I. (specific gravity 0.917). It yields in the refineries little or no gasoline, 13.6 per cent kerosene, 8.9 per cent solar or gas oil, 76.5 per cent fuel oil, 0.7 per cent lubricants, and 0.1 per cent pitch.

In the Totomi district, on the western shore of Suruga Bay, in the Prefecture of Shizuoka, shallow sands in the Tertiary have been exploited by primitive methods at Sagara, about 100 miles southwest of Yokohama. The oil occurs in a bed of loose sandstone, 3.3 feet thick, and in places in shale also. Seepages are numerous. A small production, less than 1,000 bbls. a year, has been obtained. Drilling by modern methods to a depth of 1,400 feet has not increased the yield.

The oil has a density of 43 degrees A. P. I. (specific gravity 0.811) and yields on distillation 11.3 per cent gasoline, 40 per cent high grade kerosene, 25.4 per cent solar or gas oil, 6.9 per cent fuel oil, 17.4 per cent lubricating oils, and 0.1 per cent pitch.

Hokushu District

The Tertiary formations in Hokushu have been repeatedly subjected to severe mountain-building forces and are much folded or deformed. Some of the many wells drilled along the anticline produced as much as 250 bbls. a day.

Two long anticlinal folds extend southward from Kitami Province to Teshio Province. Several wells have been drilled and some of them less than 1,100 feet deep reached oil pools. The Wakkanai anticline on the west is 8 miles long. Two or three wells have been drilled on it, and fairly rich pools were found at a depth of 2,500 feet.

Petroleum was found in Hokushu in 1903, when the International Oil Co., a subsidiary of the Sandard Oil Co. of New Jersey, brought in a flowing well of heavy oil at Hachemancho, in the Province of Ishikari. The Nippon Oil Co. took up development work here in 1904, and the Hoden Oil Co. in 1905. The Hokushu district has been only spasmodically developed. The production has averaged only 7,000 bbls. a year.

Estimated Reserves

No estimate of the petroleum reserves of Japan made by a Japanese geologist is known to have been published. Not many foreign geologists have had the opportunity to examine the Japanese oil fields. Nevertheless, J. Morgan Clements, who as trade commissioner of the Bureau of Foreign and Domestic Commerce, stationed in Tokyo, had that opportunity, published in 1922 the following estimate of Japanese petroleum reserves under the heads of oil from "proved," "probable" and "possible" ground.

	Bbls.
Oil from "proved" ground...	90,000,000
Oil from "probable" ground.	300,000,000
Oil from "possible" ground..0 to	700,000,000
	390,000,000 to 1,090,000,000

Under the head of oil from "proved" ground, Clements included only that oil which he estimated would be recovered from the important producing districts some of the fields of which have been well drilled and regarding the occurrence of which definite information is available. Under oil from "probable" ground was included that oil which would probably be derived from certain rather extensive areas totally untested in the present productive districts and from other very much larger areas in which oil seeps are known and from which but small amounts of oil have so far been obtained, as for example Karafuto (Japanese Sakhalin), Hokushu and Taiwan (Formosa). Under the category of oil from "possible" ground, Clements included the estimates of oil interritory that is not definitely known to contain any oil, but in which such conditions of structure and stratigraphy exist as to warrant a geologist in assuming that oil may occur there.

Clements does not share the pessimism of the Japanese with regard to the "proved" territory. He believes that petroleum will continue to be obtained from this "proved" ground by drilling areas in the productive fields that have heretofore been untested or very poorly tested, by drilling deeper wells and by using new and improved methods of oil recovery, such as "oil pressure," "water drive," etc. He does not expect, however, that any very marked increase in production will come from it.

DRAKE DAY OFFICERS AT PETROLEUM CENTER

The Drake Day Association, which celebrated the day at Petroleum Center, Pa., this year elected the following officers:

President—George H. Torrey, Oil City; vice presidents, H. R. Merritt, S. Y. Ramage, C. L. Suhr, J. A. Fawcett, Oil City; N. V. V. Franshot, Olean, N. Y.; J. French Miller, Franklin; R. D. Benson, New York; J. E. O'Neil, New York; H. A. Logan, Warren; J. E. Oyer, Pleasantville; John H. Markham, Jr., Tulsa, Okla.; secretary, H. G. Johnson, Oil City; treasurer, John Scheide, Titusville; directors, A. F. Seep, P. C. Beers, T. R. Stanley, E. R. Boyle, Oil City; Thomas Phillips, Jr., Butler; James L. Wilbur, Pleasantville; L. B. Carter, J. M. Bloss, L. C. McKinney, F. F. Murray, James H. Caldwell, Jr., Titusville, and U. G. Lyons, Warren.

Peter Wilbert of Oil City, presided at the meeting of the Petroleum Center Old Home Day Association. John Wilson of Titusville read a letter of greeting from E. W. McArthur of Kinzua, who is 91 years old and told of his experiences at the early Petroleum Center.

The following officers were elected for the Petroleum Center Old Home Day Association: President, Peter Wilbert, Oil City; vice presidents, Lee A. McCracken, Oil City, and G. H. Davis, Titusville; secretary, Mrs. O. D. McCray; treasurer, O. W. Betts, Petroleum Center; directors, Robert McCray, Henry Strahl and O. D. McCray of Petroleum Center.

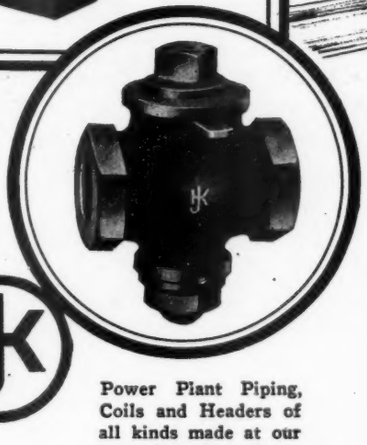
BUCKEYE PIPE VETERANS

LIMA, Ohio, Sept. 5.—The young and the old will meet at Lima, Ohio, on Saturday, September 12, 1925, when the retired men of the Buckeye Pipe Line Co., better known as the "Buckeye Retired Employes Association," will hold their annual gathering and banquet. This is always a gala day for Lima, as it brings together many that have been absent from the Trenton Rock fields for years. Mart Moran, Joe Dutton and others, now in the Mid-Continent Field, are expected to be among the crowd of homecomers.

Safeguard *against* Tampering!

Upper—Fig. 491, Essex Lock Iron Cock, Extra Heavy Pattern.

Right—Fig. 490-C, Essex Lock Iron Cock, Light Pattern. Threaded end of key has large oval end projecting beyond nut which allows key to be loosened with blow of hammer or wrench without damaging thread.



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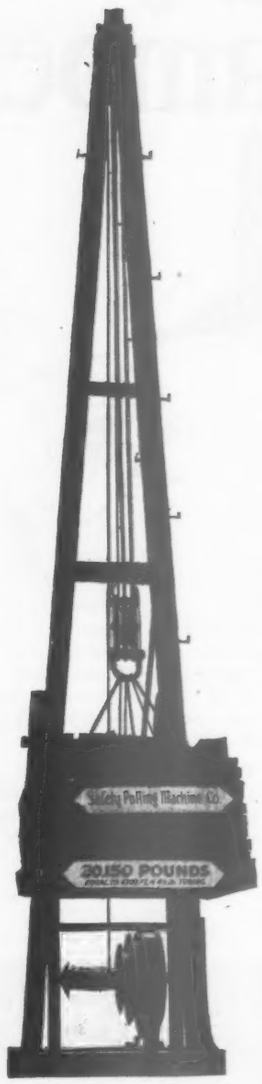
Eclipse Deepwell up to 8000 ft. 2" Tubing Weight 3645



Wreckers also made to order, approximate weight 5000 lbs. One of our customers stated that he has pulled a weight equal to 100 tons with one of these machines.

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Reel or Drum; 32 lb. 8¼ casing filled with concrete for winding drum, differentials banded with 3/16 band iron, brake surface 6"x40", choke brake style same as star drilling machine.

The whole reel assembly is mounted on 2¾ square steel shaft extending clear through reel, secured by three heavy castings.

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GEOLOGY AND OIL RESOURCES OF TRINIDAD, BRITISH WEST INDIES

By G. R. Waring and C. G. Carlson*

Trinidad is the southernmost of the West Indian Islands, and lies off the east coast of Venezuela, being separated from the mainland by the shallow Gulf of Paria. It is 1,900 miles by steamer from New York and 700 miles east of the Maracaibo oil fields of Venezuela. The island is about 50 miles long from north to south and 30 miles wide, and has an area of 1,862 square miles.

The island is divided into five topographic provinces by three east-west ranges. These provinces consist of: The Northern Range, the northern lowland, the Central Range, the southern lowland, and the Southern Range. The Northern Range reaches a maximum elevation of 3,100 feet and the other two ranges about 1,000 feet.

The Northern Range is composed of altered rocks, chiefly schists, with some grits and crystalline limestones and one small area of igneous rock. All are probably of pre-Cretaceous age, and have no oil possibilities. In the core of the Central Range there are grits and black shales with limestone lenses, all of Cretaceous age; but the greater part of the Central Range and all of the Southern Range, and the lowlands, are covered with Tertiary and later deposits.

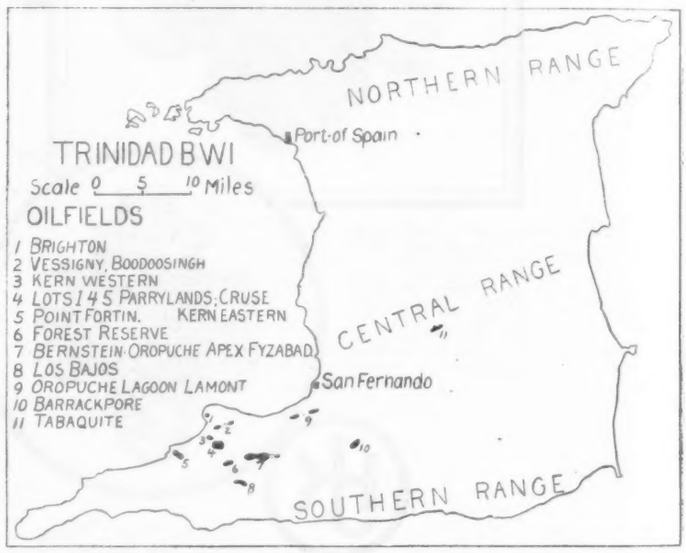
Faults and Folds

The rocks of the Northern Range dip prevailingly to the south, but there are evidences of folding which suggest that the range forms an anticlinorium, probably faulted along its axial portion, with the northern part dropped below the Caribbean Sea. The deposits of the northern lowland have been only gently folded. The structure in the Central Range is characterized by cross faults and by close folds which pass into overturns and thrust faults. In the southern lowland there is also much close folding and thrust faulting, though toward the middle part of the folding is less intense and the central portion forms a wide synclinal trough which extends across the island. In the Southern Range the folding and faulting are again more intense. Nearly all of the anticlines trend approximately parallel with the mountain ranges.

In the southern part of the island there are numerous evidences of oil, such as oil-stained sands, mud volcanoes, and a few oil springs. No surface evidences of oil have been found north of the Central Range. All of the developed oil fields are within the synclinorium of the southern lowland, and all are on anticlinal structures, in some cases modified by faulting. The commercial production of oil began in 1908 and except during the early part of the great war and the year following the armistice, has been on the increase. The production in 1924 of 4¼ million barrels, or 11,700 bbls. daily, come from about 300 wells in 11 fields, operated by 15 companies. Of the total of approximately 900 wells drilled, only about 70 have been outside the producing fields. In addition to the developed anticlines there are several within the Southern Range which seem promising. The southeasternmost structure has been tested and found productive, but it has not yet been commercially developed. Because of the heavy expenses of road making and other preliminary work there has been little testing of other relatively inaccessible structures.

Three Producing Formations

The principal oil bearing formations are recognized, consisting respectively of sands in the Oligocene (and possibly Eocene) deposits; sands at several horizons in the lower, more clayey portion of the Miocene beds, and sands in the upper, coarser-grained deposits of the Miocene. Oil is obtained in the northern-



most field at depth of 1,200 to 1,400 feet, from sands in the Oligocene or Eocene deposits. The same grade of oil (41 degrees Baume), is also obtained in this field at 300 to 500 feet, presumably from Miocene sands unconformably overlying the older beds. More than 90 per cent of the island's production comes from the fields of the southwest, where oil is obtained chiefly from the deeper horizons of the Miocene, at depths of 600 to 2,000 feet. The gravity ranges from 15 to 38 degrees Baume. The oil is obtained from zones of interbedded sands and clays or shales, rather than from distinct sands separated by shale members.

Before detailed areal and subsurfaces studies had been made in the oil producing districts, it was thought by some that the oil was related in origin to lignite beds in the upper Tertiary formations. Nearly all of these lignites, however, are high above the oil sands. The most probable source beds for the oil are the foraminiferal clays and marls, within or not far above which, the productive sands are encountered.

Some of the wells come in at the rate of several thousand barrels daily, but they often sand up after flowing for a few hours or days. Although they come in under heavy pressure relatively little gas is produced after the initial flows, and none of the fields has sufficient gas for its own fuel needs. The heavy initial gas pressure and fineness of the sands have caused much difficulty in bringing wells in under control. In some fields

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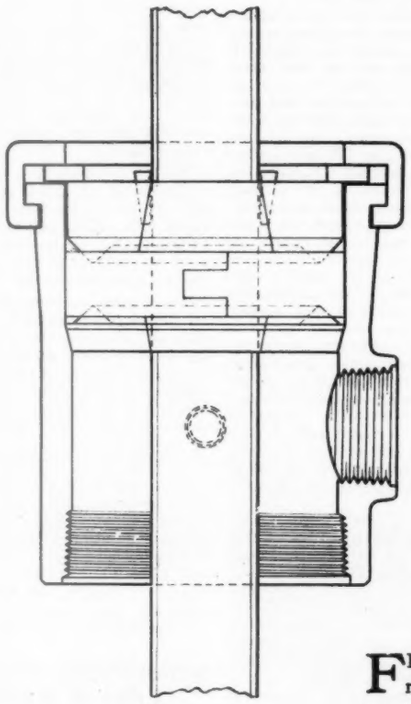

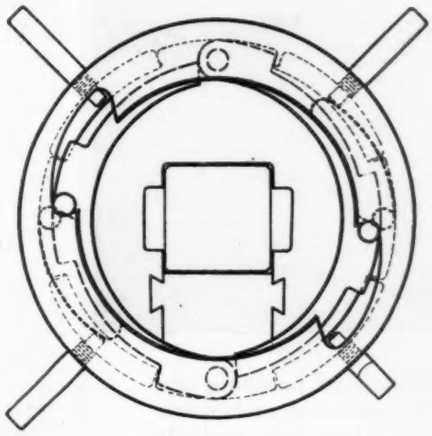

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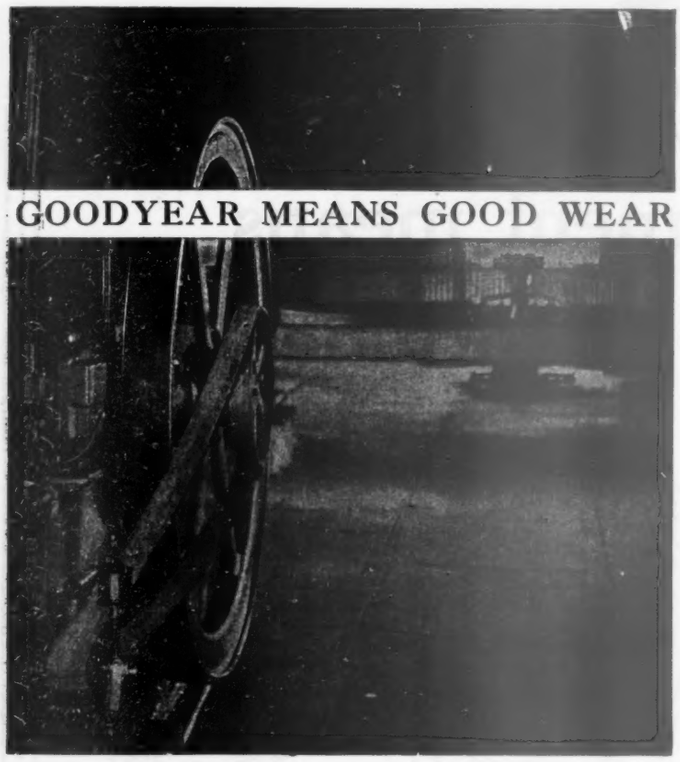

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it has been the practice to allow wells to flow through perforated casing until the gas pressure has been relieved, when the flow is choked down to prevent further caving and bridging. Screens have been successfully used in only one field, where the producing sand is so fine that 90 per cent passes a 200-mesh screen. Because of the unconsolidated nature of the formations the wells are not shot, and for the same reason the rotary system of drilling is chiefly used, except for the shallowest oil sands. In some fields salt water sands are interbedded with the oil sands, but definite edge water has not been recognized. The lenticular nature of the sands has led to unequal spacing of wells in some fields, but the present tendency is toward equal spacing, at intervals of 300 feet.

Some Wells Long Lived

Many of the wells have been short lived, as the loose sands have been rapidly exhausted, but a number are still good producers after eight years or more. One of the largest wells yielded a total of 470,000 bbls. before exhaustion, and another which had produced 315,000 bbls. during its first two years, was at the end of that time pumping 230 bbls. daily.

The oil is piped to four terminals on the West Coast, much of it is run through topping plants before shipment. Trinidad and adjacent places are supplied with motor spirit, but much of the kerosene used is imported from the United States. The greater part of the oil is taken by the British Admiralty and other British interests, but during the past few years considerable has been sent to New York. Although nearly all of the producing companies are under British control, within the past two or three years the restrictions imposed during the war period on alien companies have been relaxed. Nearly all of the Crown-owned lands and most of the privately-owned lands situated on favorable structures, are under license to oil companies.

In addition to oil, Trinidad is noted for its asphalt production from Pitch Lake, adjacent to the Brighton oil field. The lake has a nearly circular outline, one-third mile in diameter. Nearly 5,000,000 long tons of asphalt have been removed from it since the beginning of extraction in 1867, and the lake level has thereby been lowered about 16 feet. Some of the asphalt is shipped in the crude state, but most of it is refined by melting to remove the contained water. The approximate composition of the crude material is: Bitumen, 40 per cent; clay, 30 per cent; water, 30 per cent . The refined product consists of 60 per cent bitumen and 40 per cent clay. The intimate admixture of clay with the bitumen is largely responsible for the high quality of the material for street paving.

Although Trinidad may never become a much more important factor in oil production than it is at present, it is likely to be a fairly steady producer for many years. It seems that the possibility for new pools lies chiefly in the anticlines of the southeast and in some block-faulted areas in the south and southwest.

Production of Oil in Trinidad

Year	Barrels
1908	169
1909-10 (15 months, Jan. 1-Mar. 31)	10,372
1910-11 (12 months)	125,112
1911-12	285,307
1922-13	503,161
1912-13	503,616
1914-15	1,050,112
1915 (9 months)	671,124
1916	927,877
1917	1,602,311
1918	2,082,063
1919	1,841,046
1920	2,083,027
1921	2,354,159
1922	2,444,751
1923	3,050,872
1924	4,284,000
Total	23,959,439

Trinidad Production

For the first time in the history of the colony petroleum products headed the list of Trinidad exports in 1924, a record production of crude being also reported, says United States Vice Consul Alfredo L. Demorest. The increased importance of petroleum in the island's export business is indicated by a comparison with 1914; in that year petroleum products, with a value of £67,845, contributed less than 8 per cent of Trinidad's total exports, whereas in 1924, with a value of £1,367,160, they formed more than 30 per cent of the total. The advance over 1923 also was considerable, the 1924 shipments amounting to 113,000,000 imperial gallons, compared with 85,000,000 gallons for the preceding year. The major portion of the petroleum exports consists of fuel oil, most of which is sent to the British Admirality under contract.

The 1924 record of crude produced shows 2,486,269 bbls. (of 35 gallons) from Crown lands and 1,570,343 from other land; in 1923 there was a production of 1,910,547 bbls. from Crown lands and 1,140,325 elsewhere.

The larger production last year was due to the extension of fields already proved, rather than to the opening up of new areas, although nearly all of the oil companies in the colony carried out an active drilling program. New drilling in 1924 amounted to 151,892 feet—97,039 feet on Crown lands and the remainder on private property. In 1923 the total was 145,801 feet, with 87,148 feet on Crown lands.

The total number of wells drilled up to December 31, 1924, is 928, of which 596 are on Crown lands. During 1924 there were drilled 110 new wells (76 on Crown lands), an increase of 2 over the total for 1923. Oil was struck in 80 of the wells drilled during 1924.

The number of companies engaged in oil development was 17 at the end of 1923 and 16 at the end of 1924. On July 15, 1925, a new company was registered under the name of Petroleum Option (1925) (Ltd.). This company is incorporated in London, and it is stated that it was formed to continue operations at Fyzabad on the leases previously held by the Petroleum Options (Ltd.).

Four outlets for the shipping of petroleum products have been established, as folows: Claxton Bay—Trinidad Central Oilfields (Ltd.); Pointe-a-Pierre—Trinidad Leaseholds, (Ltd.); Brighton—Trinidad Lake Petroleum Co. (Ltd.); Point Fortin—United British Refineries (Ltd.). Each of these companies possess facilities for refining crude oil.

PERSIAN OIL FIELD CLIMATE HARD ON MEN

CHATHAM, Ont., Sept. 5.—Jack Fisher has returned to Sarnia, Ont. from the Persian oil fields. E. P. Jennings, of Sydney, Australia, accompanied Mr. Fisher to Sarnia. Mr. Fisher has been in Persia with the Anglo-Persian Oil Co. for three years, most of his time being spent in the interior in drilling operations, while Mr. Jennings is an engineer at the refinery at Abadan, near the coast. Both speak well of the treatment of its employes by their company, being well housed in bungalows; but they have nothing good to say of the Persian climate, though it is worse in the interior than on the coast. The best that can be said is that it is excessively hot.

Mr. Fisher made an interesting trip from Bagdad to Damascus across the Syrian desert. Instead of traveling by camel, the formerly accepted means of crossing the desert, he made the trip in a motor car. Most people when they hear of desert travel by automobile think of deep sand and overheated engines. It was not so in Mr. Fisher's case. Over the hard baked sand surface the big car traveled 60 miles an hour without the fear of ditches, passing automobiles or speed cops. Mr. Fisher returned overland from Persia to Marsailles, is glad to be home, and does not think he will go back.

Mr. Jennings is on six months' furlough. He will proceed from Canada to his home in Sydney, Australia, and having reached there will have encompassed the globe. He served with the Australian forces in the Great War, visited his home at its close, and then went out to Persia.

MINING ENGINEERS PROPOSE METHOD FOR CAVING COLORADO OIL SHALE

By Fred Carroll and G. R. DeBeque*
Mining Engineers, Denver, Colo.

Of all the methods that have been proposed for mining oil shale in the De Beque-Grand Valley district, in Colorado, none, in our opinion, is suited to the particular conditions found there. It is believed that in the early stages of large-scale production only the shales containing the largest potential oil content will be mined. To do this and conserve for future use the leaner overlying shales is the outstanding problem.

The accompanying photograph shows a typical occurrence of shale in the De Beque-Grand Valley district. It will be noted that the high-grade seam B, 50 feet thick, lies between two other seams A and C, both of which are of lower grade.

It is proposed that development work, consisting of haulage ways, auxiliary drifts, chute raises, and caving pockets, would be confined to seam A and that the tops of the caving pockets would extend upward to the lower side of the high-grade seam B. Large parallel haulage ways would be driven at intervals of approximately 64-foot centers at the bottom of seam A. Auxiliary drifts would be used as gangways from which cross-drifts would be driven to the tops of the chute raises, where the bulldozing would be done. Caving of the high-grade seam B would be started by drilling and blasting out the tops of the 6-foot pillars surrounding the caving pockets.

Leaner Strata Mined Later

The chute raises would be used as measuring pockets to hold about 6 tons each or one-half of a mine carload. The chutes would be staggered and would necessarily operate from both sides of the haulage way and a mine car would take the contents of two chutes at one spotting.

This method, in our opinion, will meet every requirement. The high-grade seam B can be removed through caving and the overlying 350 feet of leaner shale C allowed to settle and be conserved for removal, in the same manner, at some future time. Natural ventilation can be employed to advantage, and if found necessary mechanical means may be used to force the circulation of air. The shale dips at low and uniform angles. Advantage can be taken of this condition for favorable natural grades for haulage and drainage.

If, for any reason, the shale should not cave readily, or if large pieces should come down into the pockets, it would seem that it would be feasible to work from the bulldozing chambers and blast, or drill and blast, until the material starts running. Should it be found more advantageous to adopt stoping methods for breaking a portion of the shale, they can be applied in combination with the arrangement suggested herein.

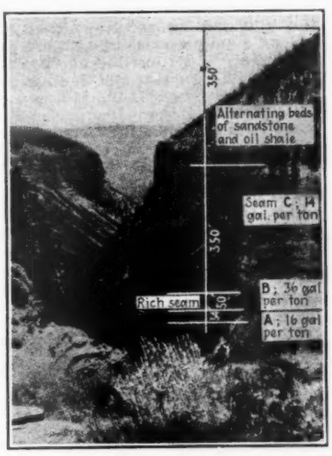
Although so little shale mining has been done in this country that the important factors of cost are unknown, we have been able to gather data that permit estimates to be made.

An improvised electric-driven auger drill did efficient work at the Mount Logan mine, near De Beque, Colo. Four-foot holes were driven in seven minutes W. L. Sheeler, of the Catlin Shale Products Co., at Elko, Nev., states that he is "mining with electric auger drills without drill columns. Two men drill 40 6-foot holes per 8-hour shift. Seven holes are drilled in headings." Holes in excess of 4 feet were not attempted at Mount Logan, on account of the limited length of auger drills; but the ease with which the holes were made, the demonstrated use of auger drills at Elko on shale, and the general use of augers in coal mining, it is believed, indicate that with machines of improved design holes up to 18 or 20 feet can be made. An almost perfect shaving is produced and there is little or no dusting. The grade and quantity of explosives required have not been accurately determined, but from such information as has been secured we make maximum estimate at 1 pound of 40 per cent gelatin per ton of shale broken.

Estimated Cost

From the foregoing, we feel warranted in estimating the maximum cost of drilling at 4 cents per linear foot, or one-half cent per cubic foot, and explosives at 1 cent per cubic foot of shale broken in development as herein proposed. It is believed that all charges, including labor, explosives and power, will amount to 4 cents per cubic foot of shale broken. At this rate the cost per acre for these items would be $9,600. Air lines, tracks, timbers, finger gates, and other material and labor for installing, we estimate to cost $11,400 per acre. To these combined amounts we have added 30 per cent to cover overhead operating charges, making a total direct cost of $27,300 for development of one acre as shown in the illustration.

Seam B contains 108,000 long tons per acre and there would be extracted in the course of development from seam A 12,000 tons, making 120,000 tons of 34-gallon shale over which to spread the cost of development, equivalent to 22.75 cents per ton of shale, or 28.10 cents per barrel of oil yielded.



Typical oil-shale deposit in De Beque-Grand Valley district showing the variation in oil value of strata.

The caving and tramming cost should not exceed that of the porphyry coppers or Alaska-Juneau. Roughly, a cost of 25 cents per ton, equivalent to 31 cents per barrel, of oil-yield from seam B may be expected. Thus the total mining cost for shale from this seam delivered at surface should not be more than 60 cents per barrel of oil yielded.

Attempts have been made to classify the shale beds according to quality and to consider as workable only those more than 5 feet in thickness that show a yield of 15 gallons or more per ton. There are about 21 such beds as shown by assay logs which may be accepted as accurate. Eleven of these are interstratified in seam C; three are included in seam B; one is in seam A, and the remaining five lie below seam A at vertical distances of from 50 to several hundred feet. Only one of such beds lying above seam B yields as much as 25 gallons of oil per ton. In view of this condition and in consideration of the fact that the average of the entire 350 feet is almost 14 gallons, the expected advantages of the caving plan for mining as suggested herein are obvious.

*Engineering and Mining Journal-Press.

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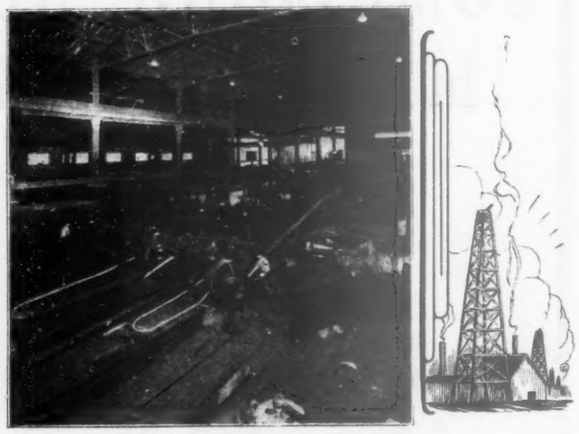

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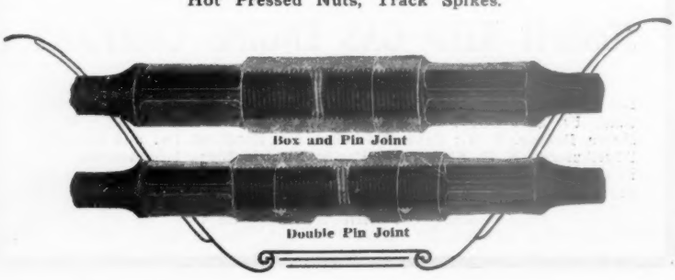

CALIFORNIA REFINERY AND NATURAL-GAS GASOLINE DATA FOR JULY, 1925

Compiled by U. S. Bureau of Mines

Forty-nine refineries reported to the United States Bureau of Mines as operating during the month of July with an aggregate daily indicated capacity of 651,800 bbls. of crude oil. This is a gain of 1,600 bbls. in daily indicated capacity. These 49 plants were operating at 86.2 per cent of their capacity running to stills a daily average of 561,560 bbls. of crude oil. This is a gain of 51,166 bbls. per day over June crude run to stills.

One hundred and thirty-one natural gas gasoline plants, with a daily indicated capacity of 1,583,904 feet, of a total of 150 plants operating in California reported their operations to the United States Bureau of Mines for the first time for July, 1925. They report a total recovery of 23,551,483 gallons of natural gas gasoline from 20,180,562 feet of gas treated. The gas treated in charcoal absorption plants is all rerun gas previously treated by the oil absorption method.

Stocks of natural gas gasoline at the end of July amounted to 153,739 bbls. of which 18,285 bbls. were reported by natural gas gasoline plants, whose figures do not show in the previous stock figures. Natural gas gasoline stocks on June 30, 1925, should be 138,489 bbls. due to the addition of 23,823 bbls. held by natural gas gasoline plants who did not report previously. Production and stock figures for the preceeding months of 1925 will be collected and published later.

Gasoline

The production of gasoline during the month of July amounted to 152,641,553 gallons, a daily average of 4,923,921 gallons. This is an increase of 7,819,528 gallons or 5.4 per cent over June output. Of this production 364,427 gallons were reported as finished gasoline produced by natural gas gasoline plant operators, who previously did not report to the United States Bureau of Mines. Compared to the production in July, 1924, an increase of 58,899,466 gallons or 62.83 per cent is noted. Of the gasoline produced 628,646 gallons were from using either a cracking or synthetic process and 152,012,907 gallons from other processes.

Stocks of gasoline show a decrease of 28,577,136 gallons during July and at the end of the month amounted to 387,355,469 gallons. This stock figure includes 17,855 gallons of finished gasoline reported by natural gas gasoline plant operators who did not previously report to the United States Bureau of Mines.

Engine Distillate

Production of engine distillate decreased 852,941 gallons to 5,320,247 gallons in July and stocks decreased 481,287 gallons and at the end of the month amounted to 24,644,315 gallons.

Kerosene

Kerosene production amounted to 21,193,831 gallons, an increase of 3,311,008 gallons over June output. Stocks decreased 5,911,327 gallons and at the end of the month amounted to 72,664,363 gallons.

Heavy Crude 20 Degrees and Below, Including All Grades of Fuel Oil

Production of gas oil, fuel oil and residuum amounted to 520,983,595 gallons, an increase of 56,932,606 gallons over June output. Stocks of heavy crude, including all grades of fuel oil increased 4,222,238 bbls. and at the end of the month amounted to 69.865,520 bbls.

Lubricants

Production of lubricants during July was 7,808,456 gallons, a decrease of 566,650 gallons under June output. Stocks increased 1,119,984 gallons to 36,714,121 gallons.

Refinable Crude

Stocks of refinable crude decreased 948,637 bbls. and at the end of the month amounted to 44,283,058 bbls.

Refinery Operations

Commodity:	Oils run to stills
Crude (bbls.)	17,408,379
Unfinished oils rerun:	
Tops ....Net	
Other oil ....Net	
Natural gas gasoline blended at refinery (bbls.)	320,916
Total in barrels of 42 gallons (bbls.)	17,729,295
Commodity:	**Refinery Output**
Gasoline:	
Cracking or synthetic (gal.)	628,646
Other than cracking (gal.)	151,648,480
Engine distillate (gal.)	5,320,247
Kerosene (gal.)	21,193,831
Gas oils, fuel oils and residuum (gal.)	520,983,595
Lubricants (gal.)	7,808,456
Wax	
Coke	
Asphalt (tons)	55,199
All other finished products (gal)	4,490,803
Unfinished oil produced:	
Tops (gal.) ....Net	8,371,314
Other oil (gal.) ....Net	9,213,117
Storage (bbls.)	135,048

Natural Gas Gasoline Plant Operations

Type of plant:	Gas Treated (1,000 cu. ft.)	Natural Gas Gasoline produced *gallons	Gasoline Recovery (M.C.F. gas treated
Oil absorption	8,829,504	9,179,378	.962 (gal.)
Compressor	359,858	559,009	.644 (gal.)
Combination compressor and oil absorption	9,548,437	13,483,193	.708 (gal.)
Charcoal absorption	1,442,763	324,224	.044 (gal.)
Drip		5,679	
Totals	20,180,562	23,551,483	.857 (gal.)
Finished gasoline produced (gal.)			364,427

Stocks at Natural Gas Gasoline Plants

Natural gas gasoline July 31, 1925 (gal.)	1,332,598
Finished gasoline July 1, 1925 (gal.)	17,855
Natural gas gasoline June 30, 1925 (gal.)	1,446,140

Petroleum stocks of California refinery and natural gas gasoline plant operators on the Pacific Coast of North and South America and Hawaii.

	In United States	Outside U. S. including Alaska and Hawaii	Total Stocks
Refinable crude 20° and above (bbl.)	44,268,673	14,385	44,283,058
Heavy crude below 20°, including all grades of fuel oil (bbl.)	69,158,655	706,865	*69,865,520
Natural gas gasoline (bbl.)	153,739		153,739
Gasoline (gal.)	381,204,431	6,151,038	387,355,469
Engine distillate (gal.)	22,458,292	2,186,023	24,644,315
Kerosene (gal.)	69,035,316	3,629,047	72,664,363
Lubricants (gal.)	35,943,061	771,060	36,714,121
Wax (lbs.)	94,321		94,321
Coke			
Asphalt (ton)	23,064	365	23,429
All other finished products (gal.	7,324,893	175,289	7,500,182
Unfinished oils tops (gal.)	257,029,141		257,029,141
Other oil (gal.)	296,810,807	148,176	296,958,983

*Due to the omission of heavy crude figures by one of the large oil companies, total stocks of heavy crude, including all grades of fuel oil for December 31, 1924, should be 56,746,371 bbls. instead of the figure published last month. Stocks of heavy crude in the United States should be 55,803,948 bbls.

LEA COUNTY, N. M. LEASES

OKLAHOMA CITY, Okla., Sept. 5.—The Chesapeake Oil Co. of Texas, said to be a subsidiary of Cosden & Co., has contracted for the lease of 80,000 acres of land for oil and gas purposes in Lea County, New Mexico, for which, it is reported, $500,000 in cash is to be paid. The leases were taken originally by the Consolidated Oil & Gas Co. They are thought to be on a trend of oil structures east from the Artesia Field and are in a wildcat area where The Texas Co., the Ohio Oil Co., the Marland Oil Co. and other major concerns are interested.

OHIO OIL AND GAS MEN

The Ohio Gas and Oil Men's Association will hold its annual convention at the Elks' Home, East Broad Street, Columbus, Ohio, on September 29 and 30.

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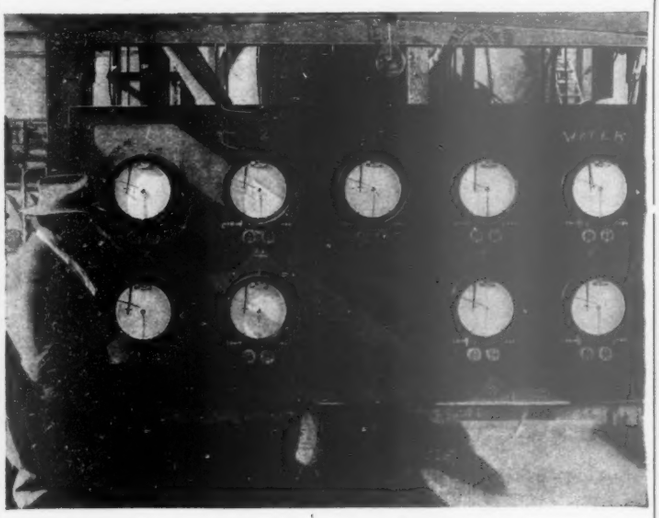

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The photograph above shows a typical installation of Foxboro Recorder-Controllers recording and controlling oil and vapor temperatures at the plant of the Sierra Refining Co., Vernon, Cal. For further information write for Bulletin 112-1.

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ROCKY MOUNTAIN GEOLOGISTS DISCUSS SUBSURFACE CONDITIONS

DENVER, Colo., Sept. 5.—R. C. Coffin, divisional geologist for the Midwest Refining Co., Southwest division, at a luncheon of the Rocky Mountain Association of Petroleum Geologists, described in a broad sweep the oil geology from the Gulf Coast northward across Texas to the Panhandle area and New Mexico.

Mr. Coffin's division comprises western Texas and the Panhandle and also Colorado, New Mexico, Arizona and Utah, and he has acquired an intimate knowledge of the oil-bearing formations of the region.

He pointed out that on surface the tertiary rocks of the Gulf Coast give way in a northerly direction successively to the very much older carboniferous and then to the gradually younger Permain and Cretaceous, and finally to an overlay of non-petroliferous recent tertiary, which makes the northern area, including Colorado, obscure and difficult to geologize. This difficulty is increased by the vast conconformities between the different ages, so that a good structure, forming an oil trip in the deep Carboniferous age, might be concealed by the overlying Cretaceous, Permian or tertiary.

Further difficulties in the geological study arises, even when test wells are drilled, because often the beds of lime are so extensive that no definite markers are obtainable, except the depth of entry into the lime; and this is unreliable on account of erosion and unconformity. Still further confusion arises because the sandstone redbeds of the Permian have a tendency to merge into limestone, so that correlations that are attempted in different areas are subject to great possibility of error.

His description pointed out, however, that after a very great thickness of the Permian, probably reaching as much as 8,000 feet and thus putting the underlying carboniferous oil-bearing beds out of drilling reach, in the region between Reagan County and the Panhandle of Texas, these carboniferous beds grow shallower to the northward, making the prolific Panhandle oil fields possible. And this shallowing tendency evidently continues on to the northward.

Mr. Coffin, as a cautionary item, called attention to geological conditions that might easily cause a good well to turn to water, but if plugged back, the water would be shut off and the well restored again to good oil production, in certain limestone formations. He laid especial stress on these limestone hazards, which must be dealt with, and also on the uncertainty of correlations, as the redbeds do not always appear at the depth where they would reasonably be expected.

E. A. Hall Tells of Kansas

After Mr. Coffin had shown the general geological conditions that lie to the south of Colorado, as far as the Gulf Coast, E. A. Hall, also a geologist of the Midwest Refining Co.'s staff, spoke of the oil geology to the east, in Kansas and Oklahoma, where he has done extensive work.

He said that in general, the younger formations in eastern Kansas have an unbroken, west dip, which can be traced west to Comanche and Clark Counties, southeast of Dodge City. In that region the dip then reverses and there is a westerly rise, giving an east dip. The small amount of drilling, however, makes the information meager that far west.

Russell County, in the center of the State, has a definite fold and closure in the Permian and Pennsylvanian, where a large production of oil has been developed, but this fold is much less pronounced in the overlying younger cretaccous formation. He also referred to a small production of oil in Salina County, but said there was no geological light on the subject.

Mr. Hall stated that the Russell County production comes from the lower part of the Pennsylvanian formation, and asserted that microscopic examination of the cuttings from the tests in southeastern Colorado made it certain that the Pennsylvanian is present there, within reach of the drill. These cuttings are from that part of the Pennsylvanian not far below the Permian.

He described a gas well in Clark County, south of Dodge City, which yielded a flow of 5,000,000 feet per day, and was supposed to be spraying considerable oil. The rig burned, however, and nothing further has been done there. This well was 5,000 feet deep and the gas was presumably coming from the lower part of the Permian formation. Mr. Hall stated that the Panhandle gas production to the south of Colorado also is coming from the basal Permian formation.

Megahan on Southeast Colorado

A. F. Megahan, one of the principals in the syndicate that is drilling the Two Buttes well on the boundary between Prowers and Baca Counties, southeastern Colorado, stated to the geologists at their luncheon that this test at 3,168 feet is bottomed 400 feet in the Pennsylvanian formation, and he exhibited fossils of that age, taken from the well.

He said that 80 feet of shale through which the well had passed constituted unquestioned source of material for oil, which leads to the hope that when a sandy formation is reached, suitable for a reservoir, a pool of oil will be tapped. There have been several good showings of oil and considerable gas. This structure has over 1,000 feet of closure, so that if production is encountered, it should be prolific.

The fishing job that has obstructed progress in the Two Buttes well for a couple of weeks seems to be near an end, as a telegram from Lamar states that the lost tools have been brought half way to the surface. These tools were lost a few days after drilling was resumed three weeks ago, so that only 35 feet of new hole was made. At that time the formation was turning softer and more sandy, placing the well now in a most interesting stage.

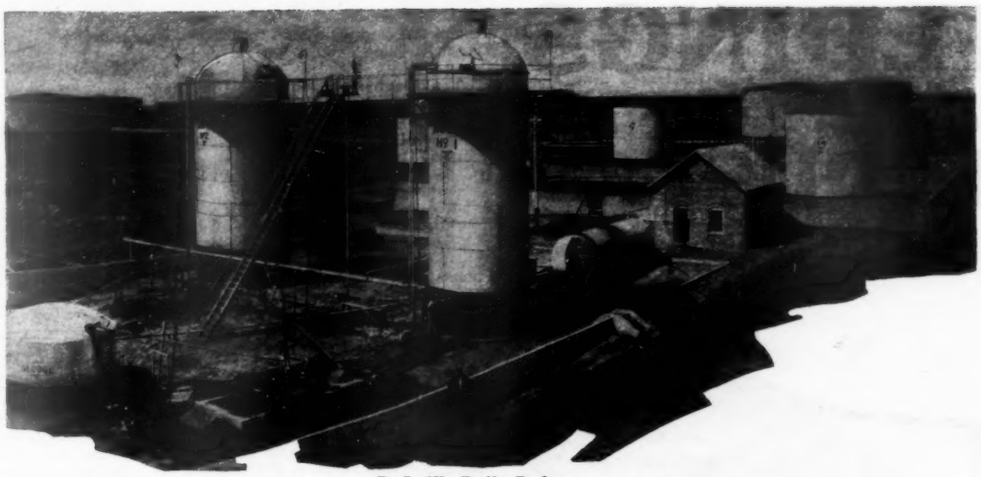
TESTS ATTRACT INTEREST IN CENTRAL NEW MEXICO

DURAN, N. Mex., Sept. 5.—Perhaps the most important feature of the last week in central New Mexico oil development is the interest evinced by several of the major companies in wildcats being drilled by independents in southeastern Torrance, southwestern DeBaca, and northern Lincoln Counties.

Paul McCune, geologist for the Midwest Refining Co. of Casper, Wyo., and Lee Horton, geologist for the Ohio Oil Co., the strongest companies now interested in eastern New Mexico and the San Juan Basin proved fields, are in charge of special crews doing plane table work on the Salado Creek structure, on which the M. E. Eddleman deep test is being drilled in Torrance County, at a point about 18 miles east of the town of Vaughn. The Eddleman test is equipped with one of the most complete drilling outfits ever seen on a wildcat in the Trans-Pecos country, including a new all-steel 84-foot derrick shipped from Pittsburgh, Pa., and a full string of standard tools. Mr. Eddleman, who is in personal charge of the drilling, is a well known contractor who came here from Coleman, Tex., to take over the supervision of the job, and he avers that his outfit is prepared to go to 6,000 feet, if necessary.

The Transport Oil Co., backed by Denver interests, which recently spudded in about 8 miles north of Duran in Torrance County, is reported to be making satisfactory progress through the top of the Permain.

The Hinkle deep test, headed by a brother of a former governor of New Mexico, and financed by California bankers, is drilling another deep test, northeast of Duran, in DeBaca County.



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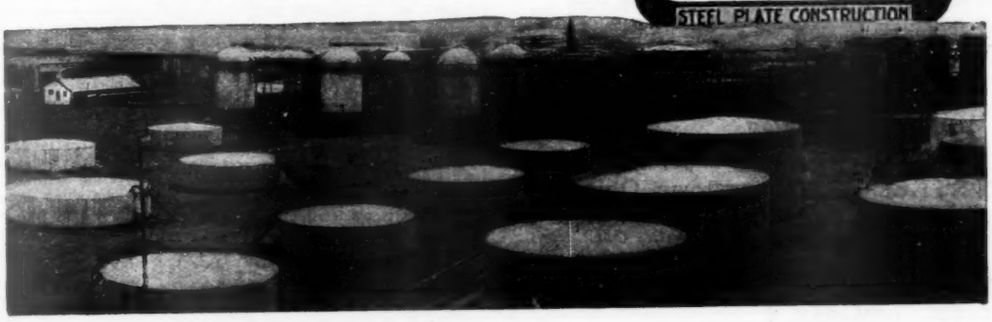

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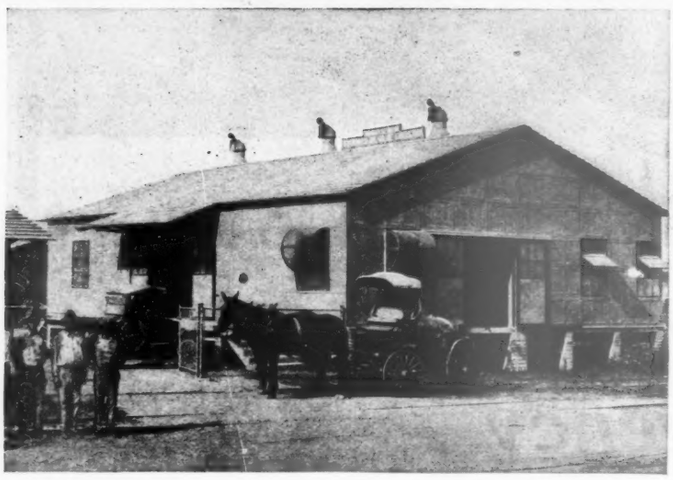

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FARM HAND MILKING ON RANCH ASKS TITLE TO VER STRATTEN WELL

FORT COLLINS, Colo., Sept. 5.—Into the overall pockets of a farm hand employed at milking cows on a ranch near here—a sunburned, toil-hardened man who sat in court garbed in blue denim and cowhide boots—Dame Fortune recently emptied part of her treasure chest.

The farm hand is James B. Worth and the treasure chest is the 40 acres of land on which the rich Ver Stratten oil well is now spouting a flow estimated at 1,200 bbls. daily.

District Judge Claude C. Coffin, who has heard testimony in the suit brought by Worth against J. J. Ver Stratten on the strength of an agreement they are said to have made before oil was struck on the property, handed down a decision holding that Worth is the rightful owner of the 40 acres.

Unless the higher courts upset this decision, Worth is destined to come into full possession of an eighth interest, in the flow of the well, a royalty interest conservatively estimated to be worth $250,000.

A long legal battle involving title to the well is in prospect following the filing of a motion for a new trial by attorneys for J. J. Ver Stratten at Fort Collins, before District Judge Coffin. The motion alleged that there was "irregularity in the proceedings of the court and in the court's findings by which the defendant was prevented from having a fair trial."

Worth contended in his suit that a quitclaim deed which Ver Stratten accepted from him was given merely as a mortgage on a loan, and did not transfer his title to the property.

A broad smile crossed Worth's face and he expressed satisfaction over the result. He did not linger in the court, or in town, however.

"Well, that's over," he remarked. "I've got to hurry back to the ranch."

Material evidence of the value of the interest in dispute in this suit has been piling up in the coffers of the court while the proceedings have been in progress. The court has received approximately $50,000 in royalty shares, it is said, paid into a trust fund, pending outcome of the litigation. This represents the payments accruing to Worth's interest since the well was brought in on March 4 last.

The Ver Stratten well is said to be flowing at an average rate of 1,200 bbls. a day. The eighth royalty interest claimed by Worth is variously estimated to be worth $250,000 to $500,000. Royalty returns, which have been paid into the court trust fund, are estimated to be more than $250 daily. It was reported authoritatively that $9,000 in royalties have been paid into this fund from the earnings for July alone.

Thought Deed Was Mortgage

In making his ruling in favor of Worth Judge Coffin declared that Worth's testimoney and that of his witnesses, who included L. C. Moore, president, and Charles E. Walker, vice president, respectively, of the First National Bank of Fort Collins, was concise and cleancut throughout.

Judge Coffin also declared that there was no question in his mind but that Worth believed that the quitclaim deed was to serve as a mortgage for the land and that he would be able to receive the land back upon payment of the sum involved.

Ver Stratten's contentions were that no agreement was made at the time of the transfer and that nothing was said about the quitclaim deed being accepted as a mortgage.

The Ver Stratten well was spudded in October 17 of last year, and drilling was completed on March 4, of this year, when, at a depth of 4,501 feet, oil rose so rapidly in the casing that further work was impossible. That night the well blew itself into the air for a distance of 50 feet. At that time officials believed the daily production might amount to 10,000 bbls. a day. The daily flow now is about 1,200 bbls. The well is 3 miles north of Fort Collins, and a quarter of a mile from the Whittaker well.

J. J. Ver Stratten is a former circus man. Some years ago he came to Colorado, and ultimately acquired, he contended, a title to the property in question.

Worth claimed he gave Van Stratten a quitclaim on the property as a mortgage for $4,500 worth of notes which Ver Stratten held against him.

Ver Stratten, who considered the quitplain, a deed to the property, he said, tried unsuccessfully for some time to raise crops on the property, which, because of its dome-like structure, could not be irrigated. For a long time the property was useless, and he considered giving it away to avoid paying taxes. Worth claims that in 1923 he offered the $4,500 together with accrued interest, as payment of the mortgage but Ver Stratten refused this.

TEXAS COMMISSIONERS SUED BY OIL COMPANY

AUSTIN, Tex., Sept. 5.—President Walter Splawn of the University of Texas, and four other officials of the railroad commission of 1924, are made codefendants in a $1 600.000 damage suit filed by the Oxford Oil Co. in Federal court at Fort Worth and Navarro County district court against them and oil companies and operators. Alleged unconstitutional and illegal enforcement of State oil and gas conservation rules, whereby the company was permitted to drill only 3 of the 10 wells it sought to drill on its 3½-acre tract in Chambers Creek, Navarro County, is charged in the damage suit. Citation was served here.

R. B. Walthall, former oil and gas supervisor, Railroad Commissioners Clarence E. Gilmore and W. A. Nabors, and Petroleum Engineer C. O. Rison, then with the commission, the Atlantic Oil Producing Co., Atlantic Refining Co., Magnolia Petroleum Co., Standard Oil Co. of New York, other companies and individual oil operators are named in the suit.

Hearings were held by the railroad commission here, after which the Oxford Oil Co. was allowed to drill these wells. It claims, as a result of alleged illegal restraint, other companies drilled nearby and took the oil which it could have produced from its tract.

The suits are directed against the State officials individually and personally, R. B. Walthall said. Officials were in consultation with the attorney-general's department, regarding the litigation.

T. H. Bass, president of the Oxford company and J. G. Bass are joined as plaintiffs in the suit with the company. The suit is said to be identical in both State and Federal courts.

Tests of legality of the oil and gas conservation law and rules promulgated under it are pending in courts. Injunctions have been issued in some cases, to restrain enforcement of the rules, pending court decision on the law.

ADMITTED TO BUSINESS

OKLAHOMA CITY, Okla., Sept. 5.—That Cosden & Co., a Maryland corporation, will continue to operate in Oklahoma since the sale of its original assets some time ago to the Mid-Continent Petroleum Corp. is evidenced by the fact that the company has been admitted to do business in the State under domestic corporation regulations. W. R. Light of Oklahoma City has been appointed State agent. A capital investment of $150,000 in the State is reported. Among other foreign corporations recently admitted to the State are the Wilson Petroleum Corp. of Delaware, reporting an investment here of $900,000, headquarters, Tulsa, and the Community Natural Gas Co. of Delaware, reported capital investment in State, $100,000, headquarters, Dallas, Tex., care the Lone Star Gas Co.

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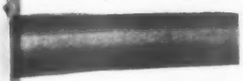
R RODS



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Couplings furnished in regular or hardened Carbonized Steel. Where joints wear excessively, the use of hardened Carbonized Steel Couplings greatly increases life of rods.

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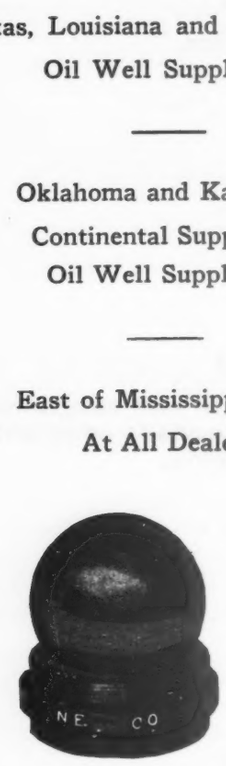

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CHROME STEEL—for general use.
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ADMIRAL CHESTER SAYS GRANT STILL HOLDS

Admiral Chester of the Ottoman American Development Co., in a report to the executive committee of that corporation, declared that the final decision of the League of Nations regarding the boundaries of the Mosul Province would not affect the company's title to the Mosul oil fields. Admiral Chester's claim dates back to 1911, he said. It is admitted that the decision may have some effect on the date when the opertions of the concession may begin.

The report, in part, follows:

"The final decision of the League of Nations regarding the Mosul boundary cannot affect the concession covering the oil fields of Mosul because the concession was negotiated by the Chesters in 1911, and the League of Nations has not the power to render a decision affecting the rights and properties of Americans abroad.

"Before confirming and ratifying the Chester concession the Grand National Assembly of Turkey considered the claims of the nationals of the different countries and found that the Chester claims were the oldest and the only claims founded upon acts of the Turkish Parliament of 1911, the last Parliament to act on concessions, all such acts having been suspended thereafter on account of the series of wars which kept Turkey in a state of war thereafter until the Lausanne conference.

"Great Britain, France and other nations admitted that the American claims were the oldest and that the ratification of the Billion Dollar Chester Concession by the Parliament of the Grand National Assembly of Turkey on April 11, 1923, removed all questions regarding its validity.

"The British military operations in the Mosul vilayet, in 1923, including the bombing of the Kirkuk and Sulemaniyah districts, and other territories comprising the rich oil fields, estimated to have a potentiality of over 5,000,000,000 bbls., prevented work from being started; and notice of force majeure was duly filed with the Turkish Government, which notice, supported by indisputable evidence that military operations prevented us from proceeding with work, mechanically extends our rights until the force majeure ceases to exist.

"The only way we can be affected by the decision of the League of Nations is by a decision that does not meet the Turkish conditions and continues the conditions approximating warfare that have obtained in the Mosul vilayet, which is a large province, with a population reported by the League of Nations' commission, among others, to be largely in favor of Turkish rule, next to self rule.

"The Turkish Government has no objection to our having British and other interests share with us in exploiting the large oil fields, and we have invited foreign interests to participate with us, so there is no need of attempting to conquer those oil fields by force of arms. Such a conquest would not extinguish our title to them and would be meaningless in that respect.

"We have the surveys ready, including the extensive surveys made by the British Government, which shows the location of the oil springs and seepages, and we have the engineering and financial plans ready. We are only held up by the military interference, and we hope the League of Nations will see the fairness of the Turkish demands and of American rights and bring about a peaceable solution of this problem."

SAN ANTONIO REFINERY FIRE

SAN ANTONIO, Tex., Aug. 31.—Fire which swept the plant of the Texas Refining Co. here last week, caused damage of $300,000 to $350,000, according to late estimates of officials. Three firemen were injured during the blaze when an explosion showered bricks on them.

ELECTRICALLY HEATED VISCOMETER DESIGNED

The C. J. Tagliabue Manufacturing Co., Brooklyn, N. Y., has added an electrically heated, stirred and controlled Saybolt viscosimeter to its standard line of official oil testing instruments.

The temperature control consists of a temperature sensitive bulb of brass, connected by flexible tubing with an expansion coil carrying the moving thermostatic contact. The other contact is a silver disc, which is intermittently turned by the action of the relay arm, thus preventing sticking contacts. The current for controlling the temperature of the bath passes through the tungsten contacts of the relay, which is operated by the current passing through the thermostatic contacts. No dry cells are used, the voltage for the thermostatic circuit being secured by tapping off a certain distance on the slide wire rheostat. This same method is used to secure the proper voltage for the controlling heating currents.

Two electric heaters are used, one of 125 watts capacity, the other of 500 watts. For quick heating, the current from the line is passed directly through the 500-watt heater, by means of the automatic throwout switch, which is set for quick heating by pushing in the plunger on the side of the case. When the temperature reaches near the controlling point, the automatic switch is thrown to the other position by action of the expansion coil, and then the control heat is on the bath. When the bath is at or near controlling temperature, both heaters are used; one with sufficient current supplied continually to keep the the temperature reaches near the controlling point, the automatic switch is thrown thermostatic contact. By this method a highly sensitive control of temperature to 1-10 degree at 100 degrees Fahrenheit and 2-10 degrees at 210 degrees Fahrenheit is secured, while at the same time a very small current passes through the relay contacts. The temperature setting can be changed by means of a thumbscrew at the top of the case, marked "higher" or "lower."

The sliding contact on the rheostat may be used to vary the amount of current on the uncontrolled heater. It may also be adjusted occasionally to take care of extreme conditions of atmospheric temperature.

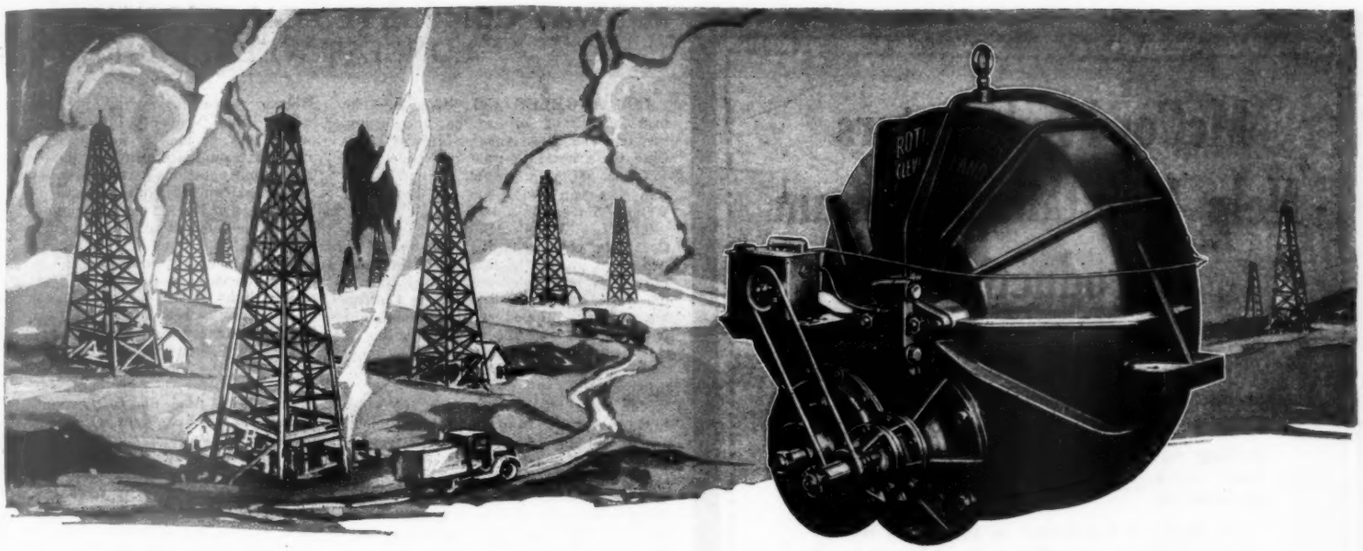
The thermostatic contacts, relay and automatic switches are assembled in a glass front protecting case, the whole controlling unit being carried on a panel, which can be conveniently hung on a wall or supported on the back of the laboratory table. Uniform temperature within the bath is secured by an effective stirring device. Since the bi-metallic type of thermostat is not employed, either water or oil can be used in this bath—a great advantage as the A. S. T. M. has specified water as the standard bath liquid, since the heat conducting properties of water are much superior to those of oil.

This bath is designed to control at one temperature only, since the greatest demand is for a bath to be used at either 100 or 210 degrees Fahrenheit continuously.

Some excellent new features have been added as a result of the intimate and constant association of the technicians of the C. J. Tagliabue Manufacturing Co. with the laboratory chiefs and other instrument users in the oil industry and in other industries where high accuracy of measurements of physical properties is required.

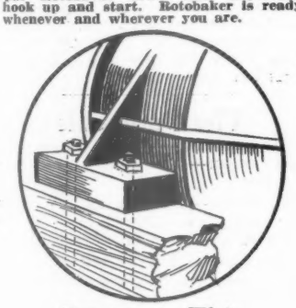
INCOME FROM LEASES LESS

The receipts during the past year from mineral leasing on the public domain under the Mineral Leasing law, according to a report made public at the Interior Department were $8,278,708. This is $5,353,132 less than the receipts from the same source during the preceding fiscal year. The greatest decrease is from leases on public lands in Wyoming where the receipts declined from $12,270,500 in 1924 to $6,953,501 in 1925.



Rotobaker Easy to Move

Weighing only 2,000 pounds fully equipped and requiring no special foundation Rotobaker is ready to move whenever you are. Most any truck will jog along twenty miles or more an hour with your power plant!
And bear in mind that Rotobaker will operate from any position. When you want to move, simply do so; when you arrive at the new point of application put Rotobaker down most anywhere, hook up and start. Rotobaker is ready whenever and wherever you are.



Contrast This "Foundation"

On either side of the Rotobaker is a lug with two bolt holes in it. Set the Rotobaker on two I-beams and bolt it to the I-beams with the four bolts—two on each side. This is all the foundation Rotobaker needs because it is mechanically and statically balanced. This is so nearly perfect that Rotobaker has been started, brought to full speed and reversed at full speed without being ever bolted to anything. An extreme test, but it proves how well Rotobaker is balanced.
Contrast this with the huge, costly and immovable foundations ordinarily found necessary—foundations that are worth less than nothing as soon as you want to move your engine.

A New Word, a New Name, Has Come to the Field of Power

This word, this name is **Rotobaker,** the name of the most extraordinary power unit ever developed—a rotary steam engine, the first important development in steam engines since James Wat. announced his stationary engine in 1800.

Rotobaker, illustrated above, is Model 550, 60 h.p.; rated speed 0 to 800 r.p.m., weighs 2,600 pounds, fully equipped. Rotobaker, this model, is daily driving the rotary deep well drilling machines for one of the large oil companies, **driving them to drilling records.**

And during these runs, shattering world records, Rotobaker established also unexcelled records of economy. Another model Rotobaker, weighing less than two tons, has replaced equipment weighing nine tons and cut operating costs in half.

Rotobaker does these things because it is different; an entirely new and an entirely different application of engineering principles. Rotobaker has six cylinders. Three of these cylinders are always applying effort.

And because these cylinders rotate, intaking and exhausting in perfect rythm, there are no low spots, no dead centers; the flow or power is so even and smooth that the hand of a volt meter records no variation.

Rotobaker operates at any speed from zero up. Model 550, a 60 h.p. engine, has a rated speed of 0 to 800 r.p.m. Any speed you want any time you want it and every one of these speeds at an economy never even dreamed of before. And at the same time this remarkable power is at your command as starting torque—**to take hold of a dead weight and move it.** No speed reducers, no low speed generators, no costly special equipment or large and expensive foundations. Rotobaker is always ready to pull, drive, lift, run slowly, run speedily—forward or reverse—whatever you want at the instant you want it.

Rotobaker can be reversed with the throttle wide open and by a patented method of by-passing the steam from one three cylinders to the other three cylinders a perfect balance is created and there is no jerking during the reversing action, no loss of Rotobaker's tremendous power. Rotobaker, by the light pressure of the finger simply ceases to go forward and goes backward.

Think of this 60 h.p. engine, this rugged, sturdy power, this remarkably smooth, flexible and extraordinary easy-to-control power being housed in one small, compact unit that weighs only 2,600 pounds fully equipped, will operate from any position, is immediately and quickly portable and has only twenty-one working parts!

Rotobaker drives drills, blowers, compressors, electric generators, pumps, etc., more safely, more conveniently, and more economically than any other power unit ever developed. No time-consuming, money-wasting delays, no twistoffs nor jammed casings; simply contiued economical operation day in and day out.

This is the Rotobaker, a name that is the synonym for the greatest of all power. Complete engineering data upon request.

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BAKER MOTORS, Inc., Union Trust Bldg., Cleveland, Ohio

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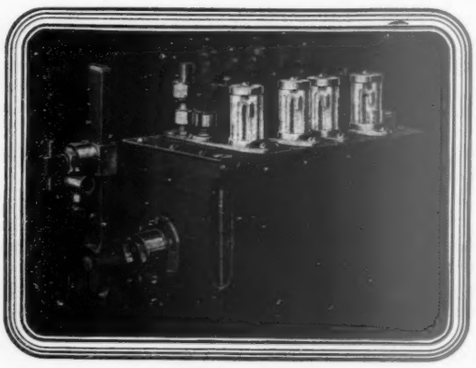

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MIDWAY COMPLETES CALIFORNIA'S LONGEST WELDED PIPE LINE

LOS ANGELES, Cal., Sept. 5.—The first barrel of oil to be transported through the Los Angeles-Midway Pipe Line Co.'s new 125-mile pipe line from Taft to Wilmington will arrive in the Pan-American Petroleum Co.'s tanks at Wilmington early in September.

The Los Angeles Midway Pipe Line Co.'s line, more generally called the Pan American line is the largest oil line over the ridge, is the longest welded line in the State, and is the first line in California to be equipped with Diesel-engine power. It is also the only trunk line of this length in California which does not find it necessary to heat the oil to facilitate pumping.

The only other lines over the ridge to Los Angeles from the Midway fields are the oil line of the General Petroleum Corp. and the gas lines of the Midway Gas Co. The other lines are routed around Wheeler Ridge, while the Los Angeles-Midway line is routed over it. Also the new line follows a higher route in crossing Liebre Canyon between the ridge and Newhall, which obviates the necessity of a pump station there and also reduces the danger of loss of oil in the event the line should break in that locality.

A delicate problem of engineering confronted the builders of the line in determining the size of the pipe to be used. The friction of oil flowing in a pipe line is an important factor, and the smaller the line, the greater friction in proportion to the amount of oil transported, and the more power is required to pump it.

The General Petroleum Corp.'s line from the Midway fields to Los Angeles is an 8-inch line, and the oil is pushed through it by seven pump stations. The engineers of the Pan American line, considering that their line was intended to handle a lighter quality of oil than the General Petroleum, with consequent less friction, decided to use 1-inch pipe. The increased cost of this size pipe was offset by the fact that its use allowed the reduction of the number of pump stations to five, because of the reduction of friction in the line.

Chain of Pumps

The first of these five pump stations is at Lake, at Taft, where the oil receives its first impetus. This takes it to the foot of Wheeler Ridge where another pump station boosts it to the crest, from which point there is practically a gravity flow to Grapevine at the foot of the ridge. At Grapevine the third pump station puts the oil through to Tejon, where the fourth station sends it over the top of the ridge, and across Liebre Canyon to the fifth and last station at Newhall, where it is pumped the remainder of the distance to Wilmington.

It will require about three days to pump a barrel of oil from Taft to Wilmington.

In equipping its pumping plant, the Los Angeles-Midway Co. departed from precedent by eliminating the steam power plants commonly used in California, and installing Diesel engines. Each pump station is equipped with two 300-horsepower Diesel engines, and two pumps, with a capacity of 30,000 bbls. a day.

In its first test of this equipment the lake pump station at Taft put 28,000 bbls. of oil through the line, the Diesel engines using but 10 bbls. of fuel oil. The fuel used is taken from the line itself.

In addition to the pumping machinery itself each pump-station is equipped with auxiliary electrical machinery, including generators and the plant and two tanks with a capacity of 37,000 bbls. each. The normal crew for operating each pump station is seven men, three shifts of two pumpers each, and a chief engineer. In addition, several men will be employed in patrolling the line.

May Be Enlarged

The capacity of the line will be about 30,000 bbls. per day, and the Los Angeles-Midway expects to average about 20,000 bbls. a day. Necessity for a greater capacity may be met by adding additional power and pumping units at each station. The pump stations are constructed of reinforced concrete, but one end of each building is of lighter construction so that it may be torn out and the building enlarged.

Due to the fact that the Pan American production in the Midway fields is mostly light oil at present, it will not be necessary to heat the oil as is the case in other lines where the heavy oil at atmospheric temperature does not flow readily. If the Pan American gets heavy oil in the future, heating equipment can be installed. Also, due to the light quality of the oil, together with the large diameter of the pipe, the oil will be put through the line at a lower pressure than is usual in most lines.

In the Los Angeles-Midway organization three dispatchers will be employed, each working an eight-hour shift. These men receive hourly reports from all pump stations, which receive their orders from the dispatcher, designating the time to start and stop pumping, and the speed at which the pumps are to operate.

The total cost of the line is between $3,500,000 and $4,000,000. The line was started last September and was rushed for a time because the Pan American Petroleum Co.'s refinery at Wilmington needed the oil. Large production at Inglewood supplied this need and work on the line was slowed up, and for three months in the spring was practically stopped. The last pipe was laid over two months ago, and the final touches are being put on the installation of machinery and equipment. The first oil will be over the mountains and in the tanks at Newhall within a few days, and early in September the first oil from Taft will arrive in Wilmington.

The Los Angeles-Midway Pipe Co. is a subsidiary of the Pan-American Petroleum Co. E. L. Doheny, Jr., is president of the company. J. C. Burnett is superintendent of the line, and is its builder. Mr. Burnett built pipe lines in the Mid-Continent fields years ago, and was a principal figure in he development of the Union Oil Co.s pipe line system in the Los Angeles Basin.

The Poor Oils

New trader—"I have sold my oil shares at a loss."

Old trader—"So have all the lambs. They have been sheared close to the skin with winter not far off."

New trader—"I have put my money, what is left, into rich men's stocks."

Old trader—"What are now rich men's stocks will become poor men's stocks in time. I guess they didn't shear you close enough."

New trader—"But why should I hold something that is going down when I can buy things that are going up?"

Old trader—"What you are now buying may be going down when the stuff you are selling may be going up. And the sages tell us that it is to be a long, cold winter."

Old trader—"You are a poor student of conditions. Gasoline consumption has increased 25 per cent and light oil production, the basis for gasoline which yields the most revenue, is off 8½ per cent since the latter part of January. It is a condition oil producers can right when they see fit. Wait till they fill their tanks with cheap crude, if they can. But don't worry; the oil stocks you are selling are going into good hands, the good stocks, perhaps, to find permanent homes. There is a buyer for every seller and I am sure the lambs haven't the courage to buy them."

New trader—"Please close the door. The wind blows cold against my fleeceless skin."—The Wall Street Journal.

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Tropical Oil Output In Colombia Field Now 35,000 Barrels

CHATHAM, Ont., Sept. 5.—The potential production of the Tropical Oil Co., the operating subsidiary of the Internation Petroleum Co. of Toronto in the republic of Colombia, now stands at 35,000 bbls. a day. Wells are being brought in regularly at the rate of one a week, and the average potential production per well remains unchanged at 800 bbls. From the beginning of the year until August 15 there were 32 producing wells completed. Altogether, Tropical Oil now has 55 producing and completed wells.

Some of the estimated potential production of 35,000 bbls. is flush. The results are looked upon as very satisfactory. There are now 16 wells being drilled. Most of the work to date has been done on the Infantas structure. One well is now in process on the Colorado structure south of the Infantas. A location is being made on the San Luis east of the Infantas.

The company is going ahead with the purchase of electrical equipment for a 3,000-kilowatt generating plant. This power unit will be used for moving crude oil from the well to the central storage plant. A subsidiary of Standard Oil of California is also doing some work in Colombia. Pittsburgh capital is interested in building operations there also, and an English company is in the field, centering its effects near the Atlantic Coast.

BLENDED CASTOR OIL FOR MOTOR LUBRICANT

HOUSTON, Tex., Sept. 5.—The Castor Oil Products Co. was organized in 1922 by D. K. Dodge and R. R. Nunn for the purpose of manufacturing a motor lubricant by blending castor oil with mineral oils under a patented process. The plant is located in Houston.

It is claimed the combination produces a lubricant that is highly efficient at a slightly increased cost. The blended product is found at filling stations in South Texas and shipments are now being made to Eastern States and foreign countries.

The idea was born during the war by a chemist in the aviation service. He experimented for four years. The blending process has been greatly improved by manufacturers since. In a general way the process is about as follows: The castor oil used is from 10 to 20 per cent cold pressed, water white, pure castor oil, with a percentage of the acidity removed. It is about the same grade as that used for medicinal purposes, which makes it expensive and the finished product therefore commands a higher price than the regular commercial lub. The grade of castor oil is then blended with paraffin-base, non-acid treated mineral oil, which has been run through Fullers earth. The mixing is done in large vats by a special treatment under agitation. The only heat used is in moving heavy stocks, which are slightly warmed to facilitiate free flowing.

The technical effect of its use in motor cars is described as follows:

"Because of the castor content, this lubricant tenaciously clings to the cylinder walls, offering far better resistance to friction than the ordinary mineral oils. This fact can be proved only on the block test, yet it is not difficult to understand, remembering the use of castor in the racing cars.

"Because that property of castor which resists gasoline dilution has been carefully retained, liquid particles of gasoline coming into the combustion chamber, upon striking the lubricant on the cylinder walls, are repelled rather than absorbed, and because heat has far less effect on a film of this lubricant, the result is that the destiny of the film of oil on the cylinder wall is maintained, with the resultant positive piston seal, the elimination of dilution seepage past the piston rings, the consequent increase in compression, a naturally hotter explosion and therefore the consumption of most of the heavy ends or liquid particles in combustion and those remaining are passed out the exhaust valve.

"By checking the dilution at the cylinder walls, dilution in the crankcase is reduced to a minimum."

DENVER CONFERENCE ON TEXAS CO. SALES

DENVER, Colo., Sept. 5.—The Texas Production Co., the Rocky Mountain producing and exploration subsidiary of The Texas Co., headed by Judge F. W. Freeman, is planning an extensive development and drilling program in Colorado during the coming year, according to Mr. Bruce, vice president and general manager of The Texas Co., who is in Denver to conduct a two-day conference with representatives of the company in five Western states.

"With a 20 per cent increase in automobile registrations," he said, "there is every reason to expect that the demand for oil products, including gasoline and lubricating oils, will soon catch up with the production which is at present larger than the consumption.

"The Texas Co.'s refineries at Casper, Wyo., must be supplied with the crude product and every effort will be made to produce oil in Colorado. In my opinion it looks as though Colorado has very good prospects as an oil state. We are very much encouraged over our success in bringing in wells in the Moffat Field. The Moffat Pool looks like a good oil field."

Fifty representatives of the company were present at the meeting in the general offices of The Texas Co. on the twelfth floor of the Foster building, including H. W. Dodge, manager of the northern sales territory, all territory north of a line due west from South Carolina to the Pacific Coast; M. A. Dyer, manager of the New Orleans district; L. H. Daniel, manager of the Oklahoma district, and D. F. Connolly of Tulsa, retired official of The Texas Co.

Sales talks by Mr. Bruce and Mr. Dodge featured the sessions. The men attending the conference represent certain groups of stations in the Denver district, including five States.

The Texas Co. is now producing from two Colorado Fields—Moffat and Tow Creek. It is also carrying forward an active development and wildcat campaign in Wyoming in the Wertz, Lost Soldier and Big Sand Draw regions.

At Big Sand Draw, which is one of the largest gas fields in the world, Texas is now rigging up to spud in a test for oil, located farther down the structure than the gas wells. The gas at Big Sand Draw comes from the upper members of the Frontier sand, and the lower members of this formation have never been tested, due to the enormous pressure.

On the theory that the hydrocarbons are coming up from below, it is figured that with the great accumulation of gas in the top stratum of the Frontier formation, the lower beds of this series and also the underlying Dakota series should be filled with oil.

BRITISH CONTROLLED OUTPUT

CHATHAM, Ont., Sept. 5.—An official statement at British Controlled Oilfields, Ltd. made public at Montreal reports that well No. 72 in the El Mene Field, Venezuela, has been brought in with an estimated initial production of 700 bbls. a day. Total shipments from the British controlled properties for the calendar month ending July 31 were 24,232 tons. The following figures show recent production and shipments:

Week ending July 22, production 40,000; bbls. shipments. 4,490 tons: July 29, production, 61.300 bbls.; shipments, 6.680 tons; August 5, production, 70,500 bbls.; shipments, 8,880 tons.

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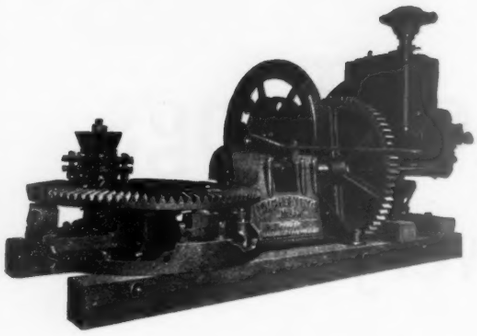

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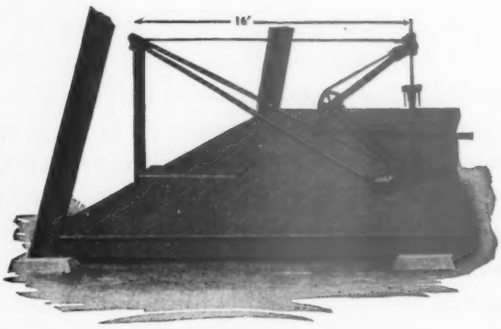

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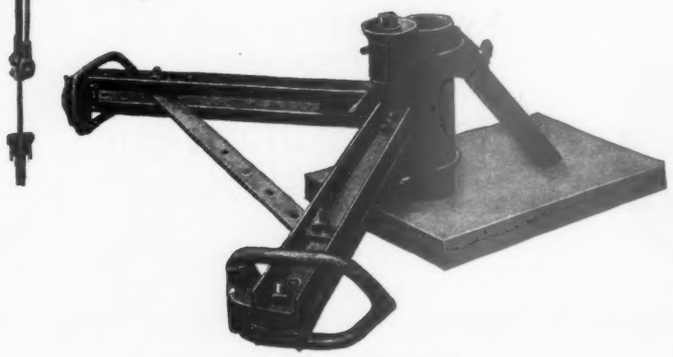

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Notable Speakers Are Slated for Petroleum Congress in October

While the complete program for the third annual Petroleum Congress, to be held in connection with the Petroleum Exposition in Tulsa, has not been completed, the speakers on the opening day may be announced.

The sessions of the Congress will be held from 10 A. M. until Noon on Monday, Tuesday and Wednesday, October 5, 6 and 7 in the Crystal Ball Room of the Mayo Hotel, which will be a great improvement over past arrangements by which the sessions were held on the Exposition grounds.

William G. Skelly, president of the International Petroleum Exposition and Congress, will deliver a short address of welcome at the opening session, followed by Gov. M. E. Trapp of Oklahoma, who will bespeak a welcome on behalf of the State. W. R. Guiberson, official representative of the Chamber of Mines and Oil of California; Henry J. Allen, former governor of Kansas; Glenn Griswold, editor of the Chicago Journal of Commerce; Dr. R. R. Matthews, chairman of the Petroleum Division of the American Chemical Society and Prof. Hellmuth Wolff, of the Halle University, Germany, will deliver addresses or papers. Their subjects will be announced later. While the Congress committee has good speakers enough to fill out its three-day program, it has not yet definitely placed them, but its plans have gone so far that it will be only a short time until the whole program may be published.

Each day the program, which will be devoted to the various departments of the oil industry, will also include a popular speaker whose subject will be of his own choosing. The Congress committee plans to frame a program that will attract and hold a large number of visitors and the sessions will be held in the morning and in a conveniently located and handsome auditorium.

The United States department of state, working with the officers of the Exposition, has sent official communications to all oil producing nations inviting them to send representatives and President Skelly has followed this up with letters to the American ministers of all capitals asking their cooperation.

OIL DRIVEN TOWBOATS ON OHIO-MISSISSIPPI

PITTSBURGH, Pa., Sept. 5.—Adaptation of the Diesel type of engine to the requirements of inland waterway craft is bringing about something of a revolution in towboat construction on the Ohio and Mississippi Rivers. If boats now being built, to be engined with the latest type of crude oil internal combustion motors are as successful as experimental boats already in service, it would appear that the days of the steam propelled river craft are numbered. Not only is the operating cost of the oil engine much lower, but fewer men are required to man the engine rooms.

Much less picturesque is the oil burner than the old steamer with long plumes of black smoke floating behind her funnels, but much more efficient and that is what is going to count in the fight to rehabilitate the waterways. The Government fleet on the Mississippi River is composed of steam propelled craft, some tunnel type screw propellers and some sternwheelers. These boats represent the most modern ideas in towboat construction, but they still fall short of the ideal in that the cost of operation is too close to their earning capacity. If that margin can be widened by the use of Diesel engines, through greater power at lower cost, river traffic will be given a great impetus.

The Jones & Laughlin Steel Co., one of the largest shippers on the Ohio River, has been experimenting more than two years now with a small Diesel engined sternwheel towboat, the Trojan. This little boat of 200 horsepower went into service July 21, 1923, and has been in continuous service since without changes in design, without repairs and without troubles of any kind. Several other small packets and towboats using the same type engine are in service on the Ohio, Mississippi and tributary waters and are giving good service. Some of these boats are sternwheel and some propellers.

The largest boat of the type now being built is expected to go into service on the Ohio River about October 1. The boat will be a tunnel-type propeller, 126 feet long and 26 feet beam, with twin engines of 360 horsepower each. With this power it is expected that boat will handle a tow of 6,000 tons at a speed of five miles an hour. This is as much tonnage as is handled in two freight trains. It is calculated that fuel and lubricating oil for this boat will average about $3 an hour, while the engines are running.

The Nashville Bridge Co., of Nashville, Tenn., is building an oil-engined sternwheel towboat for use on the Tennessee River of about the same size as the tunnel-type boat, but with engines of 200 horsepower each, and it is estimated that total cost of operation for fuel and lubricating oil will be only $1.75 an hour. The boat will have a split sternwheel and with direct reversible engines will be very easy to maneuver, much easier than a tunnel-propeller boat.

In addition to the much lower cost of horsepower per hour operation over coal or oil burning steamboats, the Diesel engined boats have the advantage of offering less resistance to wind, which is a very important factor in maneuvering ability. Because of the absence of boilers and the smaller space required for machinery there is room enough on the main deck for the living quarters for the crew, so only the pilot house and "smokestack" to carry off fumes from the engine room project above the main deck.

JOHN BARNESON SAYS YEAR'S GAIN MODERATE

John Barneson, president of the General Petroleum Corp., in commenting on operations, says in his report for the year ending June 30, 1925:

"The fiscal year just closed has been a period of moderate prosperity for the oil industry. In the United States as a whole a great increase in domestic consumption and exports was offset by increases in the production of domestic crude oil together with imports from Mexico and South America, so that total stocks of oil in storage remained practically unchanged throughout the year. The decline in the production of light oil resulted in a draft on stocks of high grade refinable crude oil, but new fields discovered during the year produced a surplus of heavy oil. These facts, combined with the heavy demand for addition gasoline, are bringing about an increased use of "cracking" processes. These processes will add to the gasoline yield from crude oil treated in renneries and will materially assist in reducing the surplus of low grade oil which now has an outlet only as fuel.

"In California, production did not decline as rapidly as in the preceding year and is still maintained as a high figure above the requirements of the Pacific Coast territory, in which California oil finds its normal market. This is partially due to maintenance of production through improved methods of recovering oil from deep wells. Shipments of crude oil to Atlantic Coast and foreign ports decreased greatly, but shipments of refined products were extended in volume and in area of distribution. Income for the year was unfavorably affected by the increased cost of purchased crude and the heavy initial expense in connection with the distributing division activities."

NEW LAGO CO. WELL

Lago Petroleum Co. completed No. 25 well in the La Rosa Field, Venezuela, at the rate of 4,000 bbls. a day. This well is 1½ miles north of the discovery well.

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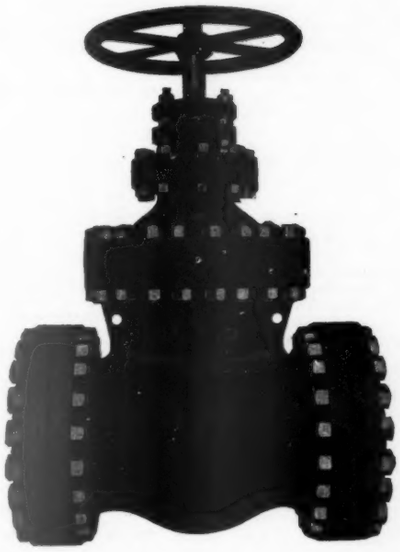

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Mexican Shipments In Sharp Decrease In Month of July

By George Blardone

TAMPICO, Mexico, Sept. 4.—Shipments of petroleum from Mexican ports of primary clearance during the month of July registered another sharp decrease even when compared with the vessel movement during June of the current year, when shipments decreased for the first time in several years below the 9,000,000-bbl. mark. The July movement totaled 8,247,410 bbls., compared with 8,910,851 bbls. in June. Compared with the movement in July one year ago, the decrease is 2,689,351 bbls.

A feature of the July movement was the really nominal clearances for the United Kingdom and the continent compared with other months. However, in analyzing the destinations of many of Mexican Eagle Oil Co.'s and La Corona Petroleum Co.'s (Royal Dutch Shell group), vessels, shipments that always practically composed the United Kingdom-Continent clearances, it will be noted a large number of vessels of these two companies clearing for Key West. It is a reasonable conjecture that these Key West clearances are "for orders" and many of them will probably be re-routed from Sand Key station at Key West for other destinations.

The July movement was dispatched as follows: From Tampico, 7,971,226 bbls.; Port Lobos, 179,875; Tuxpam, 96,309. The volume of the heavier oils of the northern fields in the movement totalled 5,869,861 bbls.

The movement in detail follows:

FROM TAMPICO

By Huasteca Petroleum Co.
(Pan American Eastern)

July	Rig	Vessel	Destination	Bbls.
1	Ss	H. G. Wylie,	Port Tarafa, Cuba	*39,468
1	Ss	Wm. Green,	Galveston	*68,058
2	Ss	Mantilla,	Tampa	*51,090
3	Ss	Wm. Doheny III,	N. Y.	*74,526
3	Ss	Montana,	Baltimore	*62,820
6	Ss	Meline,	New York	*62,168
5	Ss	Nora,	Providence	*75 137
5	Ss	W. L. Steed,	New Orleans	‡73,964
7	Ss	Wm. Green,	New York	*65,154
7	Ss	Doheny,	Galveston	*60 690
7	Ss	E. L. Doheny,	Galveston and Houston	*60,690 *61,673
9	Ss	C. A. Harwood,	Norfold and Jacksonville	‡32,532
10	Ss	Fueloil,	Miami	*14,587
10	Ss	J. M. Danziger,	New Orleans	67,921
11	Ss	Mirlo,	New York	*64,162
11	Ss	Mexoil,	Miami	*14,884
11	Ss	Cerro Ebano,	New York	*74 453
12	Ss	Mendocino,	Portland	*62,556
12	Ss	Mantilla,	Boston	*51,755
14	Ss	H. G. Wylie,	Fall River	*40,521
15	Ss	P. H. Harwood,	Galveston	*67,581
17	Ss	S. M. Spalding,	New York	*65,242
17	Ss	W. H. Doheny,	Boston	*62,464
18	Ss	I. C. White,	Providence	*65,223
18	Ss	Gymeric,	New Orleans	‡73,322
19	Ss	J. O. Boyd,	New Orleans	‡19,152
19	Ss	C. A. Canfield,	Providence	*58 909
20	Ss	E. L. Doheny,	Tampa	*60,789
21	Ss	Mexoil,	Miami	*14,891
21	Ss	Fueloil,	Houston	*14,268
23	Ss	Norman Bridge,	Port Tarafa, Cuba	*40,510
24	Ss	E. L. Doheny,	111, Rio Janeiro	*74,677
24	Ss	E. L. Doheny,	III do	*8,097
24	Ss	Montana,	Philadelphia	63,139
25	Ss	Franklin K. Lane,	New York	*64,182
27	Ss	Paul H. Harwood,	Boston	*62 761
27	Ss	Nora,	New York	*76,259
27	Ss	Crudeoil,	Miami	*14,839
27	Ss	G. G. Henry,	New Orleans	‡64,994
29	Ss	Gymeric,	Providence and New York	‡74,148
30	Ss	Wm. Green,	Rio and Pernambuco	*62,695
30	Ss	Wm. Green,	Pernambuco	‡3,582
31	Ss	Fueloil,	Miami	*14,463
		Bunker deliveries		132,833
		Total		2,377,139

By Transcontinental Petroleum Co.

July	Rig	Vessel	Destination	Bbls.
2	Ss	Durango,	New York	66,200
2	Ss	Agwibay,	Baltimore	76,157
3	Ss	Dillwyn,	Baltimore	65,372
4	Ss	Dora,	Texas City	51,132
5	Ss	Princeton,	Port Tampa	48,665
7	Ss	Gedania,	New York	86,327
8	Ss	Pioneer,	Baton Rouge	50,055
8	Ss	Mary Luckebach,	Santiago and Cienfuegos	44,401
8	Ss	Mary Luckebach,	Cienfuegos	*6 384
8	Ss	Eurana,	Jacksonville	60,676
9	Ss	S. B. Hunt	Baton Rouge	75,052
11	Ss	Muskogee,	New York	62,486
11	Ss	Dora C.	Freston and Havana	49,848
13	Ss	Glenpool,	Baton Rouge	51,417
15	Ss	Princeton,	Key West	48,641
18	Ss	Pioneer,	Nuevitas and Sagua	44,664
19	Ss	Clement Smith,	Baltimore	72,998
20	Ss	Argon,	New York	63,038
21	Ss	Eurana,	Baton Rouge	62,793
21	Ss	Glenpool,	Baton Rouge	53,030
22	Ss	Mary Luckenbach,	Key West	48,119
22	Ss	James McGee,	Montreal	90,090
24	Ss	Cape Ann,	Charleston	69,460
24	Ss	Dora C,	Port Tampa	44,975
25	Ss	W. A. Reidemann,	Baltimore	98,998
25	Ss	Algonquin,	New York	62,378
26	Ss	S. B. Hunt,	Baton Rouge	76,889
28	Ss	L. J. Drake,	Baton Rouge	61,126
28	Ss	Halsey,	Porto Rico Ports	54,099
28	Ss	Halsey,	Porto Rico Ports	*13,383
31	Ss	Glenpool,	Key West	41,297
		Bunker deliveries		89,377
		Total		1,889,527

By Mexican Eagle Oil Co., Ltd.

July	Rig	Vessel	Destination—	Bbls.
1	Ss	San Valerio,	Key West	*57,972
8	Ss	San Zeferino,	Havana	*60,441
9	Ss	San Silvestre,	Key West	*36,991
9	Ss	San Silvestre,	Key West	‡20,173
10	Ss	San Salvador,	Buenos Aires	‡63,378
10	Ss	San Zotico,	Key West	*51,800
14	Ss	San Dustano,	Key West	‡53,297
16	Ss	Santa Alicia,	Belize and Guatemala	‡3,211
18	Ss	San Quirino,	Key West	‡39,054
22	Ss	San Lorenzo,	La Plata and Rio Janeiro	*97,451
22	Ss	San Zeferino,	Key West	*60,191
24	Ss	San Tirso,	Key West	*94,951
24	Ss	San Tirso,	Key West	*58,186
27	Ss	San Patrico,	Key West	*94,951
30	Ss	Vancouver,	Brazil and Argentine	‡22,113
		Coastwise deliveries		‡84,502
		Coastwise deliveries		*330,887
		Bunker deliveries		57,893
		Total		1,192,491

By Cia. Mexicana Holandesa La Corona, S.A.
(Royal Dutch Shell)

July	Rig	Vessel	Destination	Bbls.
2	Ss	Olna,	Boston	59,011
8	Ss	A. E. Watts,	Philadelphia	63,616
10	Ss	Davanger,	New Orleans	64,505
12	Ss	Texas,	Port Arthur	60,949
13	Ss	Scott American,	Key West	58,063
15	Ss	Limicana,	Key West	*48,778
20	Ss	San Joaquin,	Key West	*59,497
23	Ss	Agwrlworld,	Philadelphia	59,190
23	Ss	Chiton,	Key West	*50,230
24	Ss	Cepolis,	Marseilles	*50,390
25	Ss	El Cano,	Key West	*40,141
28	Ss	Scott, Standard,	Key West	40,426
28	Ss	Scott, Standard,	Key West	*16,215
31	Ss	British Beacon,	Key West	45,475
31	Ss	British Beacon,	Key West	*14,759
31	Ss	A. E. Watts, Warner's N.J.		66,879
		Bunkers deliveries		59,116
		Total		867,101

By Mexican Sinclair Petroleum Corp.

July	Rig	Vessel	Destination	Bbls.
4	Ss	Madrono,	Cienfuegos	54,913
5	Ss	Harry Farnum,	Castilla, C. A.	29,790
8	Ss	W. L. Connelly,	New Orleans	31,060
10	Ss	E. W. Sinclair,	New Orleans	43,189
13	Ss	Gene Crawley,	New Orleans	28,961
17	Ss	Harry Farnum,	New Orleans	31,365
18	Ss	W. L. Connelly,	Limon, C. A.	30,029
18	Ss	E. W. Sinclair,	New Orleans	43,038
19	Ss	Madrono,	Nuevitas	55 389
19	Ss	J. F. Farrell,	Philadelphia	67,582
18	Ss	S. B. Hunt,	Baton Rouge	71,293
22	Ss	Gene Crawley,	Havana	29,088
31	Ss	Harry Farnum,	Puerto Barrios, C. A.	31,134
		Bunker deliveries		33,481
		Total		580,312

By East Coast Oil Co.

July	Rig	Vessel	Destination	Bbls.
1	Ss	F-Sulphur 1,	Freeport	18,880
6	Ss	F-Sulphur 1,	Freeport	18,685
9	Ss	Torres,	Galveston	50,522
10	Ss	F-Sulphur 6,	Freeport	28,678
15	Ss	Caloria,	New Orleans	27,436
16	Ss	F-Sulphur 6,	Freeport	30,242
17	Ss	Torres,	New Orleans	50,214
18	Ss	F-Sulphur 1,	Freeport	19,159
23	Ss	F-Sulphur 1,	Freeport	19,080
23	Ss	F-Sulphur 1,	Freeport	26,809
31	Ss	F-Sulphur 1,	Freeport	19,275
		Bunker deliveries		1,674
		Total		310,654

By The Texas Co.

July	Rig	Vessel	Destination	Bbls.
4	Ss	Louisiana,	Matanzas and I de Sagua	25,549
8	Ss	Pennsylvania,	Bayonne	*58,900
17	Ss	Louisiana,	Cienfuegos	26,037
28	Ss	Pennsylvania,	Norfolk and Providence	*26,759
28	Ss	Pennsylvania,	Norfolk and Providence	*29,082
		Bunker deliveries		8,700
		Total		175,027

By Mexican Atlas Petroleum Corp.

July	Rig	Vessel	Destination	Bbls.
4	Ss	F-Sulphur 6,	Texas City	40,773
10	Ss	L. J. Drake,	Baytown	59,238
28	Ss	Mirita,	Warner's N. J.	53,884
		Bunker deliveries		745
		Total		154,640

By Mexican Gulf Oil Co.

July	Rig	Vessel	Destination	Bbls.
10	Ss	Ligonier,	Savannah	30,237
17	Ss	Gulfoil,	Galveston	47,204
		Bunker deliveries		3,685
		Total		81,126

By Panuco Boston Oil Co.

July	Rig	Vessel	Destination	Bbls.
2	Ss	Agwimex,	Philadelphia	80,865

By New England Fuel Oil Co.

July	Rig	Vessel	Destination	Bbls.
20	Ss	Toco,	Tocopilla	58,257
		Bunker deliveries		6,183
		Total		64,440

By Mexican Oil Importers Corp.

July	Rig	Vessel	Destination	Bbls.
7	Ss	Wm. Irom,	Baltimore	30,314
31	Ss	Wm. Isom,	Baltimore	27,128
		Bunker deliveries		3,701
		Total		61,143

By Empire Gas & Fuel Co.

July	Rig	Vessel	Destination	Bbls.
2	Ss	Inverglass,	Philadelphia	56,036

By Interocean Oil Co.

21	Ss	Cassimir,	Puerto Padre.	

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They also realize that the greater bearing on pipe or casing that the "Vulcan" makes possible (due to its design and construction) is a convenience and added factor of safety which they can get in no other tongs.

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Service engineers and warehouse stocks can be found in over 85 cities in the United States, Canada and foreign countries. Plibrico is packed in cylindrical steel wooden - ended containers by a patented method.

	Cuba	45,813
	Bunker deliveries	1,707
	Total	47,520

By Pierce Oil Corp.

July	Rig	Vessel	Destination	Bbls.
24	Ss	Potomac,	United Kingdom	*29,385
		Bunker deliveries		3,820
		Total		33,205

FROM PORT LOBOS

By Transcontinental Petroleum Co.

July	Rig	Vessel	Destination	Bbls.
2	Ss	Hoxba,	New York	73,573
4	Ss	W. A. Riedemann,	N. Y.	106,302
		Total		179,875

FROM TUXPAM

By Mexican Eagle Oil Co., Ltd.

July	Rig	Vessel	Destination	Bbls.
28	Ss	San Pan	Patricio, Key West	*4,925
		Coastwise deliveries		59,885
		Bunker deliveries		31,499
		Total		96,309

JULY SUMMARY

From	Tampico	7,971,226
	Port Lobos	179,875
	Tuxpam	96,309
	Total July 1925	8,247,410
	Total July 1924	10,936,761
	Decrease July 1925	2,689,351

DIVISION OF MOVEMENT

To	United States	6,160,938
	Cuba	522,505
	Mexican coastwise	475,274
	South America	390,250
	Central America	94,164
To	Canada	90,090
	Continent	50,390
	United Kingdom	29,385
	Bunkers -(to balance)	434,414
	Total	8,247,410

CLASSES

Crudes	24,511
Topped crudes	3,061,063
Distillates	627,422
Bunkers (to balance)	434,414
Total	8,247,410

*Denotes topped crudes. ‡Denotes distillates.

OKLAHOMA CHARTERS

OKLAHOMA CITY, Okla., Sept. 5.—The Washoma Petroleum Co. of Enid, capital stock $300,000, is one of the largest oil concerns chartered in August. The incorporators are Clyde Pulse, H. G. McKeever and T. A. Banker, all of Enid. They also have incorporated Garber & Pulse, Inc., capital stock $100,000. Charters were granted recently to the Hag Oil Co. of Blackwell, capital $100,000, H. C. McIntire and others; Senior Petroleum Co., of Oklahoma City, capital $10,000; R. S. Randerson and others of the Maxine Petroleum Co. of Oklahoma City, and the Jim Bill Royalty Co. of Blackwell, capital $5,000, Robert Ballentine and others of Blackwell.

INCREASES IN CAPITAL

OKLAHOMA CITY, Okla., Sept. 5.—The Gardner Petroleum Co., of Delaware, has increased its capital investment in Oklahoma from $578,000 to $700,000; Emerald Oil Co. of Delaware, from $276,595 to $387,745. Williamsport Wire Rope Co., of Pennsylvania, $102,175 to $140,047; Oxweld Acetylene Co., of West Virginia, $17,570 to $23,708; Parkersburg Rig & Reel Co., of West Virginia, $433,000 to $442,800. The Homer F. Wilcox Oil & Gas Co., of Delaware, announced its withdrawal from the State.

MID-CONTINENT INVESTMENT

J. H. Satterwaite, of Westcott & Greis, is authority for the statement that $30,000,000 has been invested in material and construction in the natural gas business in Texas, Oklahoma and Kansas in work completed or under construction to be completed in the 18 months ending December 31.

AUTOMOBILE OUTPUT THIS YEAR GREATER

July production of motor vehicles was 357,883 passenger cars and 39,211 trucks, of which 346,728 passenger cars and 37,431 trucks were made in the United States and 11,155 passenger cars and 1,780 trucks were produced in Canada, according to Department of Commerce.

Production of passenger cars in the United States for the seven months ended July 31, 1925, was 2,203,219 against 2,010,459 for the corresponding period of 1924. For Canada production for the seven months was 91,364, as compared with 86,222 in same period of last year.

Production of trucks in the United States for the seven months ended with July, 1925, was 263,642, against 217,606 for the corresponding period of 1924. For Canada production was 12,385, against 11,209 last year.

Following table shows combined production of passenger cars in the United States and Canada since 1922, inclusive:

	1925	1924	1923	1922
January	212,921	293,822	228,861	84,192
February	262,803	343,444	260,325	112,756
March	332,154	357,006	327,046	157,842
April	391,302	346,325	351,623	202,567
May	382,714	286,266	358,657	238,463
June	364,806	225,024	344,001	268,501
July	357,883	244,503	303,516	228,457
August	.....	255,193	318,857	252,796
September	.....	263,463	302,347	190,868
October	.....	260,845	338,481	219,921
November	.....	204,316	283,510	217,955
December	.....	182,055	279,862	210,692
Total	.....	3,262,207	3,702,291	2,385,010

Following table shows combined production of trucks in the United States and Canada since July, 1921:

	1925	1924	1923	1922
January	28,147	20,662	30,510	10,000
February	34,412	32,805	33,292	13,855
March	45,101	36,323	36,645	20,637
April	47,828	37,818	39,678	23,155
May	43,286	35,181	45,719	24,916
June	38,042	28,947	42,480	26,990
July	39,211	26,290	31,740	22,537
August	.....	28,557	32,219	25,305
September	.....	31,874	29,651	19,932
October	.....	32,379	31,540	22,461
November	.....	27,820	29,191	22,535
December	.....	27,425	28,833	20,916
Total	.....	376,081	291,548	253,552

MEXICAN OIL OUTPUT SINCE 1912

The surjoined table summarizes Dow, Jones & Co. estimates of Mexican crude oil production for this year, by months, with a 1924 comparison. Total production each year for 12 years prior to 1924, is also given:

	1925			1924		
	Light	Heavy	Total	Light	Heavy	Total
January	4,012,000	7,390,000	11,402,000	2,761,000	9,481,000	12,242,000
February	3,432,000	7,071,000	10,503,000	3,664,000	9,310,000	12,974,000
March	4,038,000	7,557,000	11,595,000	4,043,000	9,947,000	13,990,000
April	3,702,000	7,554,000	11,256,000	2,999,000	9,508,000	12,507,000
May	3,534,000	7,321,000	10,855,000	3,278,000	9,223,000	12,501,000
June	3,012,000	6,686,000	9,698,000	3,270,000	7,270,000	10,840,000
July	.....	.....	.....	3,188,000	7,867,000	11,355,000
August	.....	.....	.....	3,085,000	8,302,000	11,387,000
September	.....	.....	.....	2,556,000	7,694,000	10,250,000
October	.....	.....	.....	4,147,000	6,716,000	10,863,000
November	.....	.....	.....	3,637,000	6,950,000	10,587,000
December	.....	.....	.....	3,992,000	7,233,000	11,225,000
Totals	.....	.....	.....	40,920,000	99,801,000	140,721,000

Year	Total	Year	Total	Year	Total
1923	161,727,000	1919	87,073,000	1915	32,911,000
1922	185,057,000	1918	63,828,000	1914	26,235,000
1921	193,398,000	1917	65,293,000	1913	25,696,000
1920	145,509,000	1916	40,646,000	1912	16,558,000

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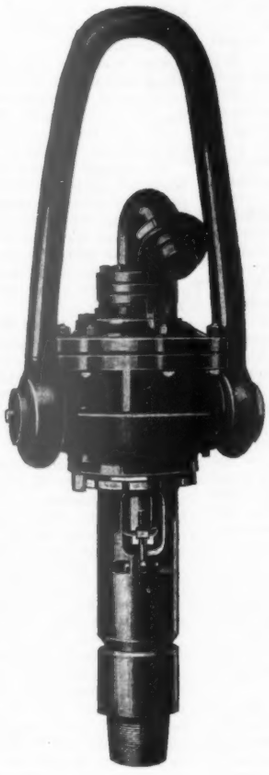
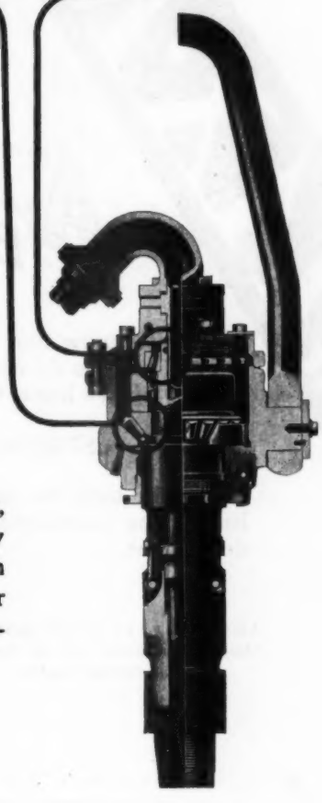


To keep pace with modern rotary drilling methods, the Lucey Manufacturing Corporation introduced the first swivel equipped with two tapered roller bearings—one for the load and one for the upward thrust and alignment. The advantages of this construction were immediately recognized throughout the rotary field and every test has proven its superiority.



Lucey swivels are now made in three sizes, 3-inch, 4-inch and 6-inch, to meet every drilling requirement. Every comparison in length, weight and simplicity with other swivels of equal capacity add to the prestige of the Lucey roller bearing swivel.

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HOW STANDARD OIL CO. FUNCTIONS; DIRECTORS ALL ACTIVE EXECUTIVES

By L. M. Fanning

In its operations, the Standard Oil Co. (New Jersey) directly or through subsidiaries, represents every branch of petroleum activity—producing, refining, transportation and marketing. Its business is about evenly divided between domestic and foreign.

Considering the rounded character of its operations, as well as the tremendous scale of its activities, it typifies the petroleum industry generally, while it also represents a method of doing business which has made the Sandard Oil organization pointed to all over the world as the most perfect business organization.

The Standard Oil Co. (New Persey) is the "parent" Standard Oil company. In 1911 the Standard Oil Trust was segregated under the dissolution decree into 33 units, the New Jersey company, with the others, carrying on as a separate entity.

The Standard Oil Co. (New Jersey) is sey) is doing a volume of business equal to all the Standard Oil companies combined in 1911. Last year its gross business amounted to $410,000,000.

More Stockholders Now

At the time of the dissolution the company had 6,078 stockholders. At the present time there are over 11,000 holders of common stock and nearly 40,000 of preferred. Before the end of this year there will be between 12,000 and 15,000 employes added to the list of common stockholders, representing employes who have subscribed to the company's stock acquisition plan.

The company now has 91,000 employes, if all subsidiary and affiliated companies are included, with an annual payroll approximating $110,000,000. There are some 25,000 employed directly by the Standard Oil Co. (New Jersey) and by companies which it fully controls.

The figures of growth of the company are evidence of the ability and foresight of the company, but for purposes of this article are quoted also as indicative of the increased obligations taken on by the petroleum industry in its drive to supply demand for petroleum products.

No industry has been called upon to meet such a tremendous increase in the demand for its products in such a short period of time as has petroleum. The whole industry has, of necessity, expended to meet phenomenal consumption.

An Era of Gasoline

The period since 1911 has been, in oil, primarily the era of gasoline. It brought along a flock of magnificent administrative and operating problems further to test the genius of those assuming the role of provender for the motorist's gasoline appetite.

The expansion of the Standard Oil Co. (New Jersey) in this period is illustrative of the entire industry's necessitated growth. In fact, to quote the company, "given efficient management, the growth of any unit in the petroleum industry in the past ten years has been measured by its ability to find capital. The internal combustion engine carried to the very door of each company virtually all of the business it had the capacity to finance.

"An endless procession of new petroleum units, financed in the main by the sale of securities to the public, have ranged over the entire marketing field of the United States and competed so successfully with the existing companies that they now control 55 to 60 per cent of the business as compared with 10 to 15 per cent at the time of the dissolution, and their percentage of the whole is annually increasing."

In this process the investment in the petroleum industry in the United States has increased from the sum of $2,700,000,000 at the time of the dissolution in 1911 to something like $9,000,000,000.

Talking to a graduating class of its unique school for employes at 26 Broadway, A. C. Bedford, chairman of the board of the company, had this to say about the future of the industry, expressing at the same time something of the responsibility devolving on the company and the need for acumen and courage of the highest type in the business:

"We cannot conceive, with the tremendous advance in size, with the far-reaching brilliancy of the human mind which is constantly bringing into existence new things, new methods, new processes, and new ways of carrying these various products into practical use for the benefit of mankind, what really the ultimate end may be. But the business has a tremendous future, as it has had a very great past. It has tremendous problems to face. Of course, it goes without saying that in a business of this character, where you are drawing your supply of Mother Earth, that the supply must be more or less in process of exhaustion; so that we always have the problem of finding new sources which means that the whole world has to be searched to care for the great demand which exists today and will exist in future. The available supply of crude has in the future to meet the future demand, and in order to meet that, of course, new methods of refining must be introduced."

The Standard Oil Co. (New Jersey) organization has been described as at once one of the most competitive, as well as one of the most democratic institutions in America. Its executives are manufactured in its own plants.

To simply record that the present board of directors—which is comprised only of executives—began at the bottom of the ladder, and to chronicle their lowly start does not fully tell the story. Their rise from the lower rungs has in almost every case been a step by step process, with years elapsing in the upward march.

Rose From the Ranks

Four of the present directors began as junior clerks and three as manual laborers. One was a telegrapher, one an office boy and one a tank wagon driver. In all there are 10 members of the board. Ages range from 39 to 71. The 39-year-old member is one of the youngest Standard Oil directors in the country, but he has seen 19 years of service with the organization. This director, it happens, was really born into the business, being the son of one of the former presidents of the Standard Oil Co. (Indiana) and his interest in the company led him to leave college soon after entering so that he could engage actively in the work that called him.

It happens that the next in point of youth—he is 47—is the president of the company, and he has served in the Standard Oil organization for 25 years. Incidentally, he became president at the age of 39, and during his incumbency some of the most important changes in policy since dissolution, and decisions incident to the tremendous expansion of the business have been acted upon.

The present board membership averages 34 years of service in the Standard Oil organization. The average age is 55 years, so in point of service the board has averaged well over half its life under the Standard Oil emblem.

All directors of the Standard Oil Co. (New Jersey) are actually in administrative work within the company. It has been pointed out that in a sense the word "director" as applied to executives of the company is a misnomer. In reality each member of the board of the company is a manager of a company which is in itself a business of extraordinary proportions.

The common conception of a director of a large corporation is that of one who, generally possessing a considerable financial interest in the corporation, reviews its affairs at board meetings, but takes no part in its actual administration. In contrast, a director of the

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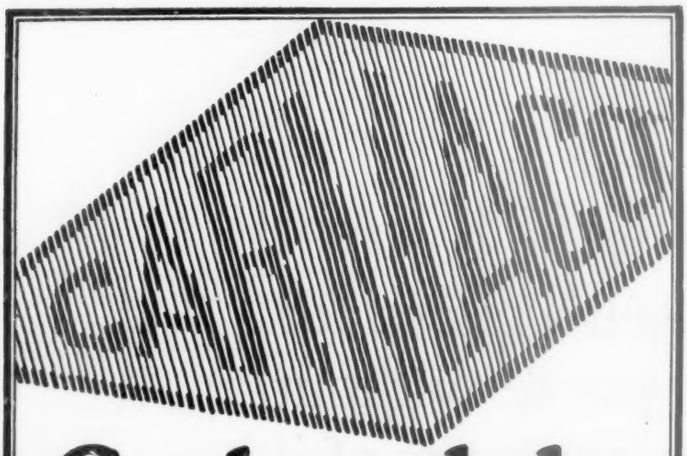

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Standard Oil Co. of New Jersey is a full-time man who not only directs but manages as well. He is a specialist engaged to bring to bear upon some particular phase of the business of the company the knowledge and ability which he has gained by many years of arduous apprenticeship. His position as a director is gained in competition with thousands of other employes of the company.

Its Administrative System

The combining of management and direction in its executives is worth stressing as part and parcel of the Standard Oil's administrative system. It is based on a simple premise that the men who manage the company by virtue of tested ability in their special field or fields can best direct its policies when they put their heads together and act in unison as a board.

Originally managed by the men who founded and built it, the company, being closely held, had these men as its active managers and directors. As these men retired it was enabled to preserve the method of having those active in the management, also in charge of the directorial policies.

At 11 o'clock every business day, with some Saturdays excepted, the directors of the Standard Oil Co. of New Jersey meet around the carved English oak table in the room on the twenty-first floor of the new Standard Oil building at 26 Broadway which combines the office of the chairman and the board meeting room. This room, by the way, is impressive in its simplicity and refinement. It is treated in the Tudor period and although quite elaborate the design has been handled with such restraint that it is very restful and imposing. The wood wainscoting and ceiling beams are of English oak, with very low relief linen folds alternating in the panels. The mantel and walls are of Kato stone with a rough texture. Various shades of color offer a very pleasant effect, when viewed simultaneously with the ceiling plaster and ornaments which are tinted to match the walls of olden times. The furniture, electric light fixtures and andirons were specially made to blend harmoniously with the major design.

There is scarcely a day without its outstanding problem for discussion and decision, although a great variety of subjects and a great detail of routine matter consumes considerable time of the board members. It is almost certain that at 11 o'clock a messenger will be seen leaving the offices of the production executives on the fifteenth floor with a great armful of maps on his way to the board room.

Each of the directors has a more or less imposing stack of papers requiring some treatment or discussion by the full board. Every department of the company's enterprise is, of course, represented so that all directors are in daily contact with practically everything of a broad character going on in the company in addition to knowing to the smallest detail what is occurring in their special fields.

Production Vital Factor

The production situation probably occupies most attention as it is fundamental, and related to it is the necessity of knowing accurately just what the company's position is as regards its own producing wells, its drilling wells, its storage, transportation, refining and marketing facilities. Frequently calls are made upon department heads and assistants and clercial forces for data to reenforce that already spread on the table by the directors.

While company affairs of every character come up at these meetings, they are matters of outstanding importance, although frequently affairs are discussed which in themselves appear small but are important in their relation to present and future company policy. All matters of policy, all matters involving expenditures, come up to the directors for approval.

Strictly departmental matters—that is, matters which, however, important are of more or less routine nature—are scrupulously left to the department head and the various administrative committees for decision and action. For this is a busy board, and one of the essentials of its effective operation is elimination of unnecessary detail.

Mention has been made of the multiple character of the company's business—it is directly or through subsidiaries, a producing company, hence the call for detailed field maps and production reports at some of the board meetings; it is engaged in every phase of petroleum transportation, hence data on oil movement through pipe lines, storage oil, tank car movement and operation of the largest fleet of tank steamers owned by any one company and with its vessels plying in every sea; it is engaged in the manufacture of petroleum products, in the manufacture of equipment and containers, hence data on supplies of raw materials and the thousands of units that go to make up the complete refinery; it is engaged in marketing in the Unitest States and in many foreign countries, hence data of infinite detail and variety dealing with petroleum and industrial affairs throughout the world.

Available to the directors desiring to communicate with their own and other departments during conferences, is a portable automatic telephone which can be revolved about the table to the required position. This eliminates the necessity of having a half dozen or more phones on the table.

The directors' meetings are supposed to extend from 11 o'clock until 1 o'clock but frequently they reconvene in the afternoon at 2 o'clock and may last for a couple of hours.

When the directors conclude their morning session it is customary for all or most of them to lunch together in the dining room on the seventeenth floor. In the east end of the room a round table with 12 places is reserved for them, and it is seldom that some of the members do not have guests with them, in some cases foreign representatives. The dining room is maintained by the Standard Oil Co. of New York, owners of the building, and is an institution in the Standard Oil organization. Department heads and assistants up to the facilities available are served.

Coordination Essential

It is obvious that in a business with such ramifications and of such magnitude, where one thing depends so vitally on another, that coordination in operation is essential, and thus coordination in management and direction is a first requisite. As stated, all directors are active executives supervising each department of the company's activities.

Virtually all departments function under a supervisory committee, but the committee plan is not followed in every case, some departments operating as such under a manager and his assistants. Frequently a manager of one department serves on a committee of another department, where relations are closely affiliated.

The method can probably be best described as regards the manufacturing department. This department has two representatives on the board of directors and these are the executives in charge of the refineries operated by the company. Supervising refinery operations is the manufacturing committee, with a chairman and secretary. Other committee members rank as general managers of the different refineries, in almost every case having formerly been superintendents of the plants which they now supervise as committee members. Certain members divide their time between the New York office and the refineries. Also on this committee is the manager of the development department. The manufacturing committee meets every day. It has to keep in close touch with the producing department as well as the marketing department, in the one case being advised as to the crude oil supply and the kind of crude available, while in the other being informed as to consumption requirements and having to regulate the operations of the refineries accordingly. Each refinery has a superintendent located at the plant who receives his instructions from the manufacturing committee through the general manager member on the committee.

Another way to describe the process

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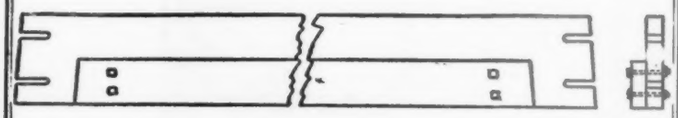

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is to cite the rise of one of the present directors representing manufacturing. From superintendent of the Bayway refinery he became a member of the manufacturing committee, ranking as general manager of the plant. He then became chairman of the manufacturing committee, which placed him directly over the operations of all refineries. From the chairmanship of the committee he was elected to membership of the board of directors, relinquishing chairmanship of the committee.

The marketing committee is another important administrative body, having a chairman in supervisory charge of all marketing but ranking below the marketing representative on the board of directors. The committee is composed of the heads of the various product departments such as domestic sales, lubricating oils, chemical products division, bulk sales, fuel oil and foreign sales. This committee meets three times a week.

The domestic production department of the Standard Oil Co. of New Jersey is the Carter Oil Co., a 100 per cent owned subsidiary, with separate executives. There is a foreign production department in direct or indirect charge of all the operations, direct or through subsidiaries, of the company in outside companies. The ranking head of domestic production is a vice president of the company and a director, as is also the ranking head of the foreign production department. In the case of the Standard Oil Co. of Louisiana, also 100 per cent owned and with its own executives, production, manufacturing, and marketing officials of the Standard Oil Co. of New Jersey are in supervisory relation to its operations which embrace all branches of petroleum activity.

The marine department in charge of the Standard Oil Co. of New Jersey tanker fleet, which is the biggest privately owned fleet under American registry, is represented on the board of the directors and functions in close cooperation with the other departments.

The development department of the company is one of the most important and is of comparatively recent establishment. It meets the modern need of the petroleum industry to keep actively at work on the investigation and development of new processes for the production and manufacture of oil.

Other important departments are the legal and medical departments, while one of the most important committees is that on annuities and benefits, which has frequent sessions and comprises representatives of the industrial relations plan department and the personnel department. Employe problems are considered of prime importance and receive a great deal of attention at board meetings.

BREA-OLINDA WELLS' REMARKABLE RECORD

LOS ANGELES, Sept. 5.—Completion by the Shell Co. of a 2,400-bbl. well in the Brea-Olinda Field, between two old wells which together have produced nearly 8,000,000 bbls. of oil, has given the oil industry something new to talk about.

The new well, Orange No. 3-A, is a new hole drilled to take the place of Shell's old Orange No. 3, the casing of which collapsed after the hole had produced between 2,000,000 and 3,000,000 bbls. The new well is only a dozen yards from the old one.

Still more extraordinary is the fact that the Orange No. 3-A is not over 300 feet from the Birch Oil Co.'s famous old Birch No. 5, drilled by A. Otis Birch in 1900, and still pumping 175 to 200 bbls. a day.

According to Mr. Birch the old No. 5 has produced between 4,000,000 and 5,000,000 bbls. of petroleum—close to the latter figure. Except for a brief shutdown in 1917, the hole has been producing almost constantly since it was completed 25 years ago. Its only resting periods have been occasional spells when crews have cleaned it out and repaired its pumps.

No. 5 was drilled 3,900 feet deep. It came in at 2,400 bbls. a day. At the end of two years, according to Mr. Birch, it was still flowing 2,000 bbls. a day. After flowing for five years it tapered off and was put on the pump, and the old pump is still chugging away. The remarkable thing is that the new Shell well, located between the old Orange No. 3 and Birch No. 5, showed the same production when it was completed that the Birch No. 5 showed when completed a quarter of a century ago.

The Orange No. 3-A was finished at a depth of 4,500 feet. The old Orange No. 3 drilled by the Columbia Oil Producing Co. in 1908, was drilled about 4,000 feet. Officials of the Shell Co. think the Orange No. 3-A is producing from the same sand as the Birch No. 5, but Mr. Birch is inclined to think that Shell finished its well in an entirely new sand.

The new Shell producer is standing up well and is putting out about 2,000,000 feet of wet gas a day, in addition to its oil. The oil tests 29 degrees gravity. The gas pressure at the casinghead is reported to be 900 pounds.

Operators who are familiar with the Brea-Olinda Field, which is famous over California for its long-lived wells, say the remarkable records of the Birch No. 5 and Orange No. 3 are attributable to the fact that the holes were drilled in the earthquake fault zone of the Puente Hills, and that the fault condition caused the oil structure to contain pockets, from which certain wells were able to draw phenomenal production.

Mr. Birch states his company has 10 producing wells in that area, all of which are still pumping 100 bbls. or so per day, but none have shown anything like the producing power of the Birch No. 5.

The old Orange No. 3 was turned over by the Columbia Oil Producing Co. to the Union Oil Co. of Delaware, which a few years ago passed into the control of the Shell Union organization, for which the property is now operated by the Shell Co.

OIL AND GAS MEN'S DAY AT SHREVEPORT

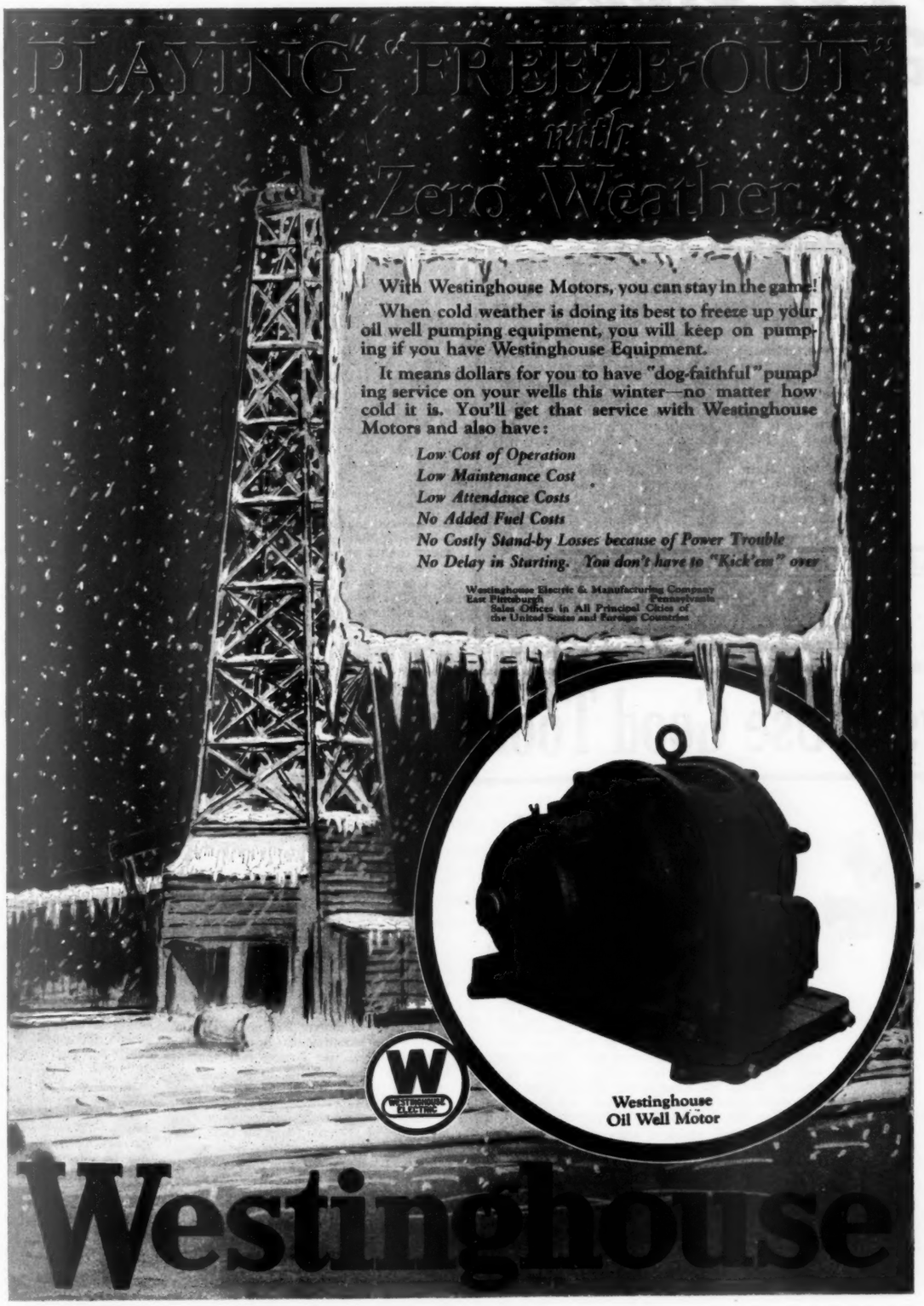
SHREVEPORT, La., Sept. 5.—Oil and gas men of Louisiana and Arkansas are planning for Oil and Gas Men's Day October 31, at the Louisiana State Fair at Shreveport. A big parade will be staged representing every department of the industry. Exhibits at the fair grounds will include drilling and pumping rigs in actual operation, demonstration of ditchers and pipe laying machines and an interesting exhibit of modern oil field machinery and equipment.

Ten bands have been invited to parade and furnish music at the fair grounds and among those attending will be the Magnolia Petroleum Co.'s band from Beaumont, Texas; the Stanocola band, of Baton Rouge, composed of trained musicians and all employes of the Standard Oil Co.; the Mexican Petroleum Co.'s band, from Destrohan, La., which will make its first appearance in Shreveport on that date, and the Standard Oil Co.'s saxophone band of New Orleans.

A committee has been appointed, headed by C. K. Clarke, of the Standard Oil Co., and assisted by N. C. McGowan, R. O. Roy, R. W. Howe, and C. M. Bennett, all prominent in the oil industry in this territory, charged with the success of this celebration, and Geo. O. Baird, president Louisiana-Arkansas division of the Mid-Continent Oil & Gas Association, has announced the association is sponsoring the undertaking and is entering heartily into the program.

J. C. DONNELL'S VIEW

Prior to his departure for Europe James C. Donnell, president of the Ohio Oil Co., discussed oil conditions. "We are running into the same sort of price depression in oil as we did a year ago," he said. "It is brought about by a lot of people refining more oil than they can readily find a market for the refined products or who have not the finances to carry any surplus.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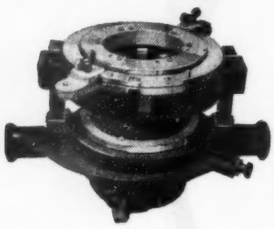

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GASOLINE TREATED WITH TETRAETHYL LEAD NOT HAZARDOUS MIDGLEY SAYS

By Thomas Midgley, Jr.*

Last fall in a semi-work's production plant manufacturing tetraethyl lead by a newly developed process there occurred an accidental poisoning which cost the lives of five men. The newspaper publicity engendered by this accident gave rise to a variety of opinions and opened an attack upon the general proposition of using tetraethyl lead in gasoline.

Although these opinions were in almost every case the result of assumptions as to the facts, rather than knowledge, it is believed that the best interest of the public will be served by a clear statement as to the actual hazards involved in carrying out the ethyl gasoline program.

It is not the purpose of this address to enlarge upon the benefits of the use of tetraethyl lead in gasoline. It may not be amiss, however, to mention broadly the advantages to the public which will follow upon its general use. These are (1) conservation of petroleum due to the increased mileage obtainable by using a nonknocking gasoline in a high-compression motor, (2) reduction of carbon monoxide contamination of the atmosphere due to increased efficiency of combustion, and (3) reduced cost of automotive apparatus. So far as science knows at the present time, tetraethyl lead is the only material available which can bring about these results, and the results are of such vital importance to the continued economical use of all automotive equipment that, unless a grave and unescapable hazard exists in the manufacture of tetraethyl lead, its abandonment cannot be justified.

The actual hazard involved in the general program of treating gasoline with tetraethyl lead has been found to exist only in the manufacture and handling of the concentrated material. However, for the purpose of a complete discussion it is well to mention all the points where the most careful study of the matter indicates any possibility of hazards, and discuss each one upon its merits and the data available. These points are (1) the manufacture, (2) the handling and mixing with gasoline, (3) the handling of the treated gasoline, (4) proper use of the treated gasoline in internal combustion engines, and (5) the improper uses of such gasoline.

Manufacture

Admittedly, a hazard exists in the manufacture of tetraethyl lead, but compared with other chemical industries it is neither grave nor unescapable. This hazard has been recognized and has been guarded against always to the full extent of the knowledge available, but, like any other commercially new chemical product, tetraethyl lead has peculiarities which are only fully understood after practical experience, and which could not possibly be predetermined from laboratory work.

The greatest danger both in the manufacture and handling of the concentrated tetraethyl lead lies in the fact that it is a slow poison rather than an active one. It is well to distinguish between these two properties. Tetraethyl lead is only one-twentieth as poisonous as bichloride of mercury, and for that matter is much less poisonous than many other commodities in everyday use, but unfortunately it gives no warning to the subject until he approaches a condition of serious poisoning. For this reason, workmen become careless in handling tetraethyl lead and, even when most carefully watched, they may in time contract poisoning if there is any possible chance of exposure to it. This has been the history of practically every individual who has suffered from tetraethyl lead.

As the result of experience, which, however, costly, seems nevertheless to have been the only possible teacher, tetraethyl lead poisoning can now be detected by a well-informed physician before the slightest danger develops. In this connection it will be well to mention the difference between tetraethyl lead poisoning and the ordinary type of lead poisoning familiar in the lead industry. Ordinary or chronic lead poisoning is denoted by the following symptoms: stippling of the blood cells, lead line at the base of the teeth, stomach cramp (commonly called painter's colic), paralysis (most commonly wrist drop), and in extreme cases spasms and death. None of these symptoms are observed in poisoning due wholly to tetraethyl lead, in which case the symptoms are, in the order of their appearance, drop of blood pressure, drop of body temperature, reduced pulse, sleeplessness, loss of weight, sometimes nausea, sometimes tremor, and, in the most serious cases, delirium tremens. The first three do not indicate any danger to the patient, who, if removed from proximity to tetraethyl lead, readily recovers his original health within a short time. With the development of sleeplessness, however, the experienced physicians regard a man as being in some danger and direct not only that he be carefully kept from any possible further contact with tetraethyl lead but, above all, that he be kept out doors as much as possible, taking moderate exercises. It is inadvisable to put the patient to bed, since this appears only to add to his nervous condition, and the administering of sleep-inducing drugs which would ordinarily be employed under such conditions has been found to be decidedly harmful.

In the commercial manufacture of tetraethyl lead it is necessary to supervise the men closely in order that they may not grow careless. Proper means for preventing tetraethyl lead from coming in contact with any workmen—proper chemical apparatus, suitable types of clothing, and adequate ventilation—must be provided, for it must be borne in mind that tetraethyl lead may enter the body through the skin or by inhalation as well as through the mouth.

Handling and Mixing With Gasoline

In handling tetraethyl lead at the points where it is mixed with the other constituents of the concentrated ethyl fluid and where the ethyl fluid is added to the gasoline, adequate clothing protection must be used and the safety rules, although simple, must be rigidly inforced. Apparatus designed to prevent the men from coming into contact with tetraethyl lead must be used.

Handling of Treated Gasoline

After mixing tetraethyl lead with gasoline, no great precaution need be exercised, the ratio being 1 part tetraethyl lead to 1,300 of gasoline. From this point on no health hazards actually exist unless the gasoline is used very abnormally for purposes for which it was not intended. Animals have been subjected to gasoline treated with tetraethyl lead and such lead as was absorbed along with the gasoline has been shown to be eliminated. These experiments have been carried on under conditions that could not be duplicated by a human being.

After this treated gasoline has been introduced in the tank of an automobile there are no health hazards, although many imaginary ones have been suggested. The fumes arising from the gasoline itself have been suggested as a source of possible danger. These have been studied carefully, but it has so far been impossible to cause any damage to the health of animals by excessive treatment with such fumes.† In fact, it has been impossible to detect any difference in this regard between the treated gasoline and ordinary gasoline, whereas benzol, used instead of gasoline under the same condi-

*Since this article was written certain experiments have indicated that prolonged and excessive inhalation of the vapor from ethyl gasoline or extreme and continued skin contact with ethyl gasoline may result in storage of lead in experimental animals.

†Before division of Industrial and Engineering Chemistry, American Chemical Society, Baltimore, Md., reported in Industrial and Engineering Chemistry.

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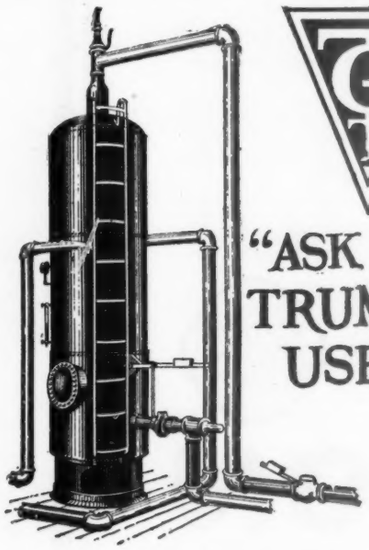

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tions, produces death in a very short time.

It has been suggested that the amount of tetraethyl lead vapor emitted by a gasoline motor which is being cranked but which is not firing constitutes a health hazard. Since the amount of gasoline vapor contained in such a mixture is so great as to be irrespirable, the experiments were carried on tetraethyl lead vapor at the concentration occurring in such an exhaust. With such a concentration toxic effects could be noticed upon animals in 24 hours, but by diluting this concentration to one-half it was possible to keep animals for upwards of six weeks without developing toxic effects. When it is remembered that the exhaust from any motor must be diluted many hundred times before it can be breathed, it becomes apparent that this bug-a-boo is laid to rest.

The exhaust from an operating motor has received an enormous amount of attention both in the writer's laboratory and by the United States Bureau of Mines, and it has been impossible to develop data to substantiate any claim whatsoever that any danger to the general health of the public at large exists in this exhaust. It may be well to review briefly the work carried on by the Bureau of Mines covering this point.

The experimental station at Pittsburgh, Pa., is equipped with a room originally designed for studying carbon monoxide concentration from automobile exhausts. This room had to be changed slightly in order to obtain any lead from the exhaust of a motor using the treated gasoline, and was so arranged that the maximum amount of lead dust coming from the motor in an absorbable form was dispersed throughout the chamber. The exhaust from a motor burning the treated gasoline was introduced into the room and diluted with just enough air to correspond with an atmosphere in which there would be the permissable amount monoxide for one-hour exposure without dangerous effects to life from carbon monoxide. The carburetor of the motor was carefully adjusted so as to reduce the carbon monoxide content to a minimum, but leaving the lead-dust content unchanged. Two sets of animals were then introduced into the chamber —one set for six hours and one set for three hours per day. A control set of animals was also kept in the animal house but never allowed to come into contact with lead in any way. All sets of animals included pigeons, monkeys, dogs, guinea pigs, and rabbits. The animals were carefully noted at different periods through the test which lasted eight months, for any symptoms of lead poisoning. Not a single symptom developed, and at the expiration of the test several specimens both of the exposed animals and of the control specimens were purposely killed. The bodies were analyzed for lead, and although lead was found in all cases it was a very minute quantity and was the same in the control animals as in the exposed animals.

Further tests are now going forward with a gasoline containing five times the normal quantity of tetraethyl lead.

Improper Uses of Ethyl Gasoline

Ethyl gasoline is sold to be used only as a motor fuel, and the public is specially warned of the dangers in using it otherwise, such as for washing motor parts, washing human body parts, for cooking purposes, etc. This gasoline has been colored with an aniline dye to distinguish it from any other material sold to the public. Nevertheless, exhaustive tests have been carried on both by the writer's laboratories and by the Bureau of Mines to determine what hazards may exist in the improper use of this material. It will be recognized that there is perhaps no limit to the improper uses to which gasoline may be put, and that such an investigations can never be considered as entirely completed. With a single exception, however, no health hazard has yet been discovered in the improper use of this gasoline. The one exception is the use of the gasoline in an open flame for toasting bread, in which case it has been determined that after several days of such a diet a touch of painter's colic may result.

Tests have also been run to determine the settling of lead dust in a garage, without disclosing any menace therefrom.

No one is more anxious to discover if any health hazard exists in the use of tetraethyl lead than the people who are interested extending its use. They have endeavored in every way possible to anticipate future conditions, and even intensify these conditions, without, however, having been able to verify any of the statements upon which many criticisms have been based.

SALIENT FEATURES OF HOLBOL PROCESS

The Holbol process for the manufacture of inherently balanced hollow seamless balls is of particular interest to petroleum engineers. Heretofore the manufacturers say the ball valves in refinery hot oil pumps, working barrels of oil well pumps, pipe lines, check valves, etc., were provided with either solid or hollow cast balls. The weight of the ball in such applications is of fundamental importance.

Holbols have been developed with the object of producing a ball which incorporates all the advantages so essential for valve and pump duties. In addition to the steel balls, the Hollow Ball Co., of Baltimore, Md., which controls the basic patents on the process, both in the United States and abroad, is now manufacturing Holbols in brass, copper, aluminum and Monel metal in sizes as small as ¼-inch and as large as 3-inch and beyond. The raw material used in the manufacture is coil strip for the smaller sizes and seamless tubing for the larger.

The salient feature of the process is the one-piece construction. In the strip method the metal is automatically fed into a press which blanks and draws it into a cup. This cup in the second operation is redrawn and then trimmed, the object being to produce a blank with a perfectly smooth edge and of a length calculated for the upsetting operations which follow. These latter consist of ovaling and rounding. When the ball emerges from these last stages, it is of a nearly spherical shape with an aperture at one point.

The tube method differs mainly in the fact that preliminary to the press operation, the cold drawn seamless tubing is curved and simultaneously trimmed to length, the purpose being to compensate for the tendency of the wall to become heavier at the "poles" than at the "equator" during the upsetting operations. As to the ovaling, pointing and rounding dies, they are designed on the same general principles as those used in the strip method.

However, whether the strip or tube method is used, the gist of the Holbol process is in the rolling operation which is designed to accomplish the following objects: First, it must close the holes completely; second, it must render the wall uniform on all diameters, and third, it must produce a homogeneous, closely grained surface. The grooves are filled with the spherical blanks as they come out of the press operations, and the machine set in motion. As the balls roll, spin and gyrate, they continually expose all points of their surface to the action of the hardened steel plates. At the same time the plates are gradually being drawn togther, contracting the volume of the balls so that the excess metal flows into the apertures, completely knitting them together into a homogeneous mass, integral with the rest of the ball surface.

Throughout the whole process, both in the press operations and in rolling, the balls are manipulated cold. This is of special importance as it gives the surface the requisite fatigue-resisting grain structure, and prevents the formation of internal stresses which are difficult to relieve even by the most up-to-date normalizing methods. Another interesting feature is the practical elimination of the hazard of having defective balls

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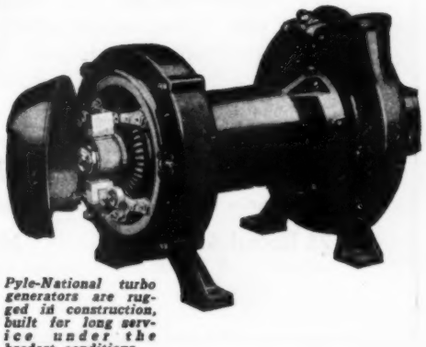

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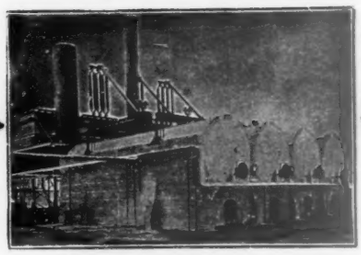

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slip through the inspection. In the first place the strip of seamless tubing used is less liable to have flaws. If it should happen that defective material would get by in inspection, and put into process, it is hardly possible it would stand the strenuous action of the presses. Furthermore, during the rolling operation the ball is subjected to such tremendous pressures that this in itself can be considered as an endurance test.

The company is now conducting some extensive investigations into the problem of applying Holbols to ball bearings. As to valve and pump service, the balls have been subjected in the course of the last year to a series of successful endurance tests in actual service, especially in the oil field. Typical of Holbol applications is the working barrel of an oil well pump where the lighter, inherently balanced Holbol constitutes a great improvement by rendering the valve more sensitive, quieter in operation and longer in life. Another important application is the hot oil pump used in refineries where heretofore unbalanced cast and cored balls were used. Pipe line pumps and check valves offer another fertile field for these balls.

In a test performed in the Johns Hopkins University mechanical laboratory of the check valve type, the balls stood over a half million impulses without the slightest change in surface.

The company has also developed an aluminum featherweight brass ball which has been since adopted by large oil distributing companies for the relief valves of their gasoline storage and delivery tanks. The function of the featherweight ball is to lift when the pressure reaches a predetermined safety limit, permitting the fumes to escape, and at the same time automatically shut off the outlet when the pressure becomes normal.

NEW CONSTANT PRESSURE OIL ENGINE DESCRIBED

The Sun Shipbuilding & Dry Dock Co. of Chester, Pa., has completed the building of the new Whaley oil engine, invented by William B. Smith Whaley and designed by Charles A. Muller of the Whaley Engine Patents, Inc.

This Whaley engine is described as a single-acting four-cylinder two-cycle machine designed to develop 750 horepower. It is a vertical reversing engine, conventional in design though following the best steam engine practice. It is described as distinguished from all other heavy oil engines by the fact that the cylinder clearance, at the time of fuel ejection, is opened by a piston valve to communication with a static receiver having many times the capacity of the cylinder clearance. In the Whaley engine, the piston valve to the static receiver is open as long as the fuel is bing ejected.

The Whaley engine has the usual form of port scavenging supplemented by high pressure scavenging and supercharging through the top of the cylinders. The last two operations are carried out with air at a pressure of about 45 pounds per square inch. The air pumps for the superscavenging and supercharging operations are contained in the lower part of the power cylinders. There is a supplemental scavenging air pump formed in the upper part of the frame in which operates a piston on top of the crosshead. Two cylinders are cast in block with a valve chest between. The air from the pumps is used either in direct line or is transferred through the ports in the valve chest to the opposite cylinder.

The air is controlled by piston valves, one working inside the other and both being actuated by links similar to those used on locomotives and reversing marine steam engines. By linking up, the opening of the piston valves is made to synchronize to the period of fuel injection in such a way that, for practical purposes, combustion takes place during the entire time the valve is open. The practical effect will be that fuel will be supplied to the point of cut off of the piston valve, which will be open for the power necessity of the engine. The result-diagram will, therefore, be that of the steam engine so far as the admission and point of cut off are concerned. The main purpose of the clearance reservoir is to maintain the maximum working pressure desired, which, in the case of the present engine, is 350 pounds per square inch. As this is the normal compression-pressure of each working cylinder, it is also the normal pressure for the receiver or reservoir.

Under normal running conditions, no variation in pressure is expected no matter what the conditions of loading and fuel injection may be. In floating the receiver on the compression space, there will be but little transfer of air, heat or pressure through the valves. The receiver serves as an absorber in case of any rise in pressure in the cylinder through any cause whatever. By an ingenious arrangement of the valves, the compression space port is made to serve successively for the introduction of the superscavenging, and supercharging and to establish communication with the reservoir or receiver during the combustion period.

A novel arrangement of fuel pumps and fuel admission valves is used. The fuel pump is placed on top of the valve chest and is driven directly from the valve stem. The pumps deliver the charge of oil for each stroke directly into each individual fuel valve, there being no piping whatever employed. The pressures will be betwen 4,000 and 8,000 pounds per square inch. The action of the pumps cynchronizes with the action of the valves, both being operated from the same valve stem, thereby assuring the maintenance of relation between fuel injection and duration of the valve opening to cut off. Because of this construction, it is said there practically will be no rise in pressure in the cylinders or in the system beyond that due to compression.

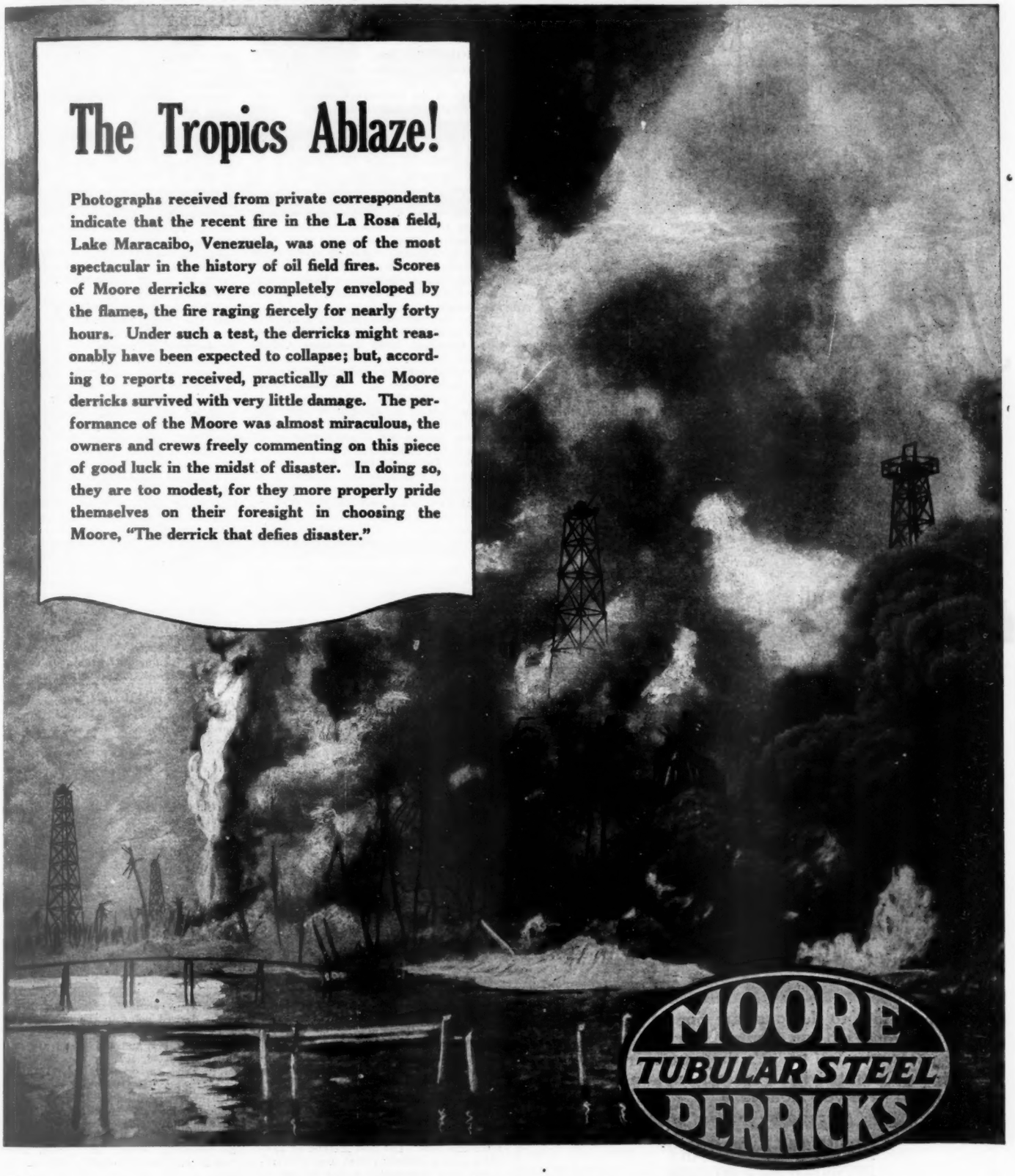
The fundamental action of the Whaley engine is entirely different from that of any of the present oil or Diesel engines. Maintaining the maximum pressure to a definite figure allows the carrying out of a program for the design of relatively ligatweight oil engines. It is expected the Whaley engine will weigh less than 100 pounds per horsepower. Also, due to the maximum pressure principle, the Whaley engines, for all sizes of power, can be built at approximately the same weight per horsepower as is the case with steam engines.

The Whaley Engine Patents, Inc., own the patents for the Western Hemisphere. The International Whaley Engine Corp. own the patent rights for the Eastern Hemisphere. The American Locomotive Co. own the exclusive license for the use of the Whaley engine on rails for the Western Hemisphere. The Sun Shipbuilding & Dry Dock Co., Chester, Pa., has a contract for building these engines for marine and stationary use in the United States. The engineering firm of Parish & Tewksbury, Inc., New York, has had executive charge of this development since February, 1924.

MORE SHE "LOCATED" THE BETTER SHE GOT

SMETHPORT, Pa. Sept. 5.—Fred Anderson of Clermont, who last week struck a gigantic gas well starting off with a production of 1,000,000 feet daily, gives all the credit for his big strike to the uncanny occult powers of Mrs. Jake Groner, a Bradford clairvoyant.

When Anderson decided to go into the drilling business for himself on his farm just outside of Clermont, he consulted Mrs. Groner, who visited his land and marked a location for a well. The result was a gasser producing 96,000 feet daily. Again the farmer had the clairvoyant mark another location and the result was a 128,000-foot gas well. Recently he engaged Mrs. Groner to make a third location and the 1,000,000-foot well last week was the result.


The Tropics Ablaze!
Photographs received from private correspondents indicate that the recent fire in the La Rosa field, Lake Maracaibo, Venezuela, was one of the most spectacular in the history of oil field fires. Scores of Moore derricks were completely enveloped by the flames, the fire raging fiercely for nearly forty hours. Under such a test, the derricks might reasonably have been expected to collapse; but, according to reports received, practically all the Moore derricks survived with very little damage. The performance of the Moore was almost miraculous, the owners and crews freely commenting on this piece of good luck in the midst of disaster. In doing so, they are too modest, for they more properly pride themselves on their foresight in choosing the Moore, "The derrick that defies disaster."
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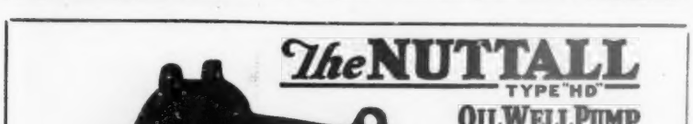

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STUDY OF THE SANDING OF WELLS LEADS TO SUGGESTED REMEDIES

HOUSTON, Tex., Sept. 5.—John R. Suman, vice president and general manager of the Rio Bravo Oil Co., a subsidiary of the Southern Pacific Railroad, contributed an interesting article on wells "sanding" in the Gulf Coast region to the proceedings of the American Institute of Mining and Metallurgical Engineers.

Mr. Suman's article in part is as follows:

"Excepting the very few oil fields of the world in which the production comes from a limestone formation, the greatest problems encountered in oil wells come from trouble caused by sand. These troubles are brought about by sand accumulating in the strainer, liner, tubing, or cutting out various parts of the well equipment.

"In the 'soft sand' producing districts such as California or the Gulf of Texas and Louisiana, wells often come in flowing at the rate of several thousand barrels of oil per day, and after flowing a few hours, 'sand up.' In many cases it will be found that when the sand is cleaned out of the strainer or liner, and the well again starts flowing the production will be but a small fraction of what it was originally.

Failure to Come Back

"The most satisfactory explanation of this failure of wells to come back to initial flow, after once sanding, will be found from a close study of the producing formations. It will usually be found that the oil producing zone consists of alternating layers of sand and shale. In the Gulf Coast district these alternating layers may be only a few feet or a few inches thick. When the well blows out or starts to flow with an accompaniment of strong gas pressure the sand is blown into the hole through the screen, strainer, or perforated pipe. Large quantities of sand quite commonly accompany these flows. The holding of back pressure on the wells by use of 'flow beans,' etc., tends to hold back the sand. Also the use of fine-gage screen helps to hold the sand back; but if the pressure is very strong and the gas is present the screen is usually cut out in short order

"The explanation of the failure of the well to 'come-back' after being cleaned out, consequent to the initial sanding up, will be found back of the liner or screen. It will probably be evident that the alternating layers of sand and shale have given up most of their sand for several feet back from the hole, and the shale layers have collapsed against the screen, effectively sealing the majority of the sands, and preventing the flow of oil to the hole. Thus a 5,000-bbl. flowing well, after being cleaned out, will probably come back as a 300-bbl. pumper

"Quite often in the Gulf Coast, after a flowing well sands up, and is cleaned out a smaller size of screen will be set inside the original screen to hold the sand back. Many operators are of the opinion that this setting of the small screen, and attendant trouble of fluid in getting through two sets of screens, has a direct bearing on the lowered production; but it is doubted that this is an important factor.

"Pulling of screen and resetting rarely helps such a condition. This is due to the sealing effect of the collapsed shales which extend probably several feet back from the hole. The best method of handling such a situation is to drop a 'whipstock' and 'sidetrack,' trying to get as far away from the old hole as possible. Such a repair has a far greater chance of bringing the well to its original status than any repair work which could be carried on inside the strainer.

"The writer is inclined to agree with Kobbe and others that it is very desirable, in order to get maximum recovery per well, to produce a considerable amount of sand in pumping wells. Experience in 'soft sand' fields will probably bear out the statement that the wells producing the most sand have a high ultimate recovery of oil.

"Sand coming into a properly screened pumping well is a different problem from sand coming into a flowing well under high gas pressure. In a pumping well the movement of sand toward the liner is such that small sand grains move between larger ones to enter the liner. When this condition is ideal we have a footing of large sand grains around the outside of the screen with the size gradually getting smaller as we move outward. This furnishes an excellent footing for long-lived wells and maximum oil production. With this condition there is practically no tendency for the shale layers to cave, as the volume of sand has not changed.

"This sanding of producing wells inside the tubing and inside the liner is due to one of several causes which might be discussed as follows:

"'Pumping wells sand up in many instances, because so much sand comes in with the fluid that the pumping equipment cannot handle it. This may be remedied by installing pumping equipment of a different type, or by a sufficient fluid heat can be maintained on the sand to prevent excessive movement. Of course, when handling fluid making an excessive amount of sand, the plunger pump is the correct type to use. In the Gulf Coast of Texas a few operators, in order to cope with a very bad sand condition, are using plunger pumps of regular type with closed traveling valves. This 'Maccroni' pump, as it is called, used 1-inch and 1¼-inch pipe for sucker rods, and the oil moves to the surface inside the 'rods.' One advantage of this is to give the sand-bearing fluid a very high velocity which tends to prevent settling back. Some operators in California have experienced trouble in getting plungers to fit perfectly, due to warping of barrels, and other distortion effects, caused by the underground heat. To avoid this they have gone to the multiple stage plunger pump, which is simply three or more short plungers and barrels set one above the other.

"Pumping-Off"

"Another common cause of sanding of pumping equipment is by wells 'pumping off,' or only making fluid at intermittent periods. During these times, when the fluid is at rest, the sand naturally settles back through the tubing against the pumping equipment, and freezes the plunger in the barrel. The well does not necessarily have to be making a large amount of sand to do this. The remedy is to use smaller size plunger and barrel.

"Some of the sanding troubles can be avoided by studying the fluid level of the pumping wells, and pumping the wells in such a manner that sufficient heads of oil can be maintained on the sand to stop its movement into the well. This necessitates raising the working barrel to the desired point in the hole.

"In pumping dsitricts where the gas pressure is low and the sands are partially exhausted, it may not be desirable to raise the working barrel to the desired point. On the other hand, it is often necessary in order to get the best results, to lower the working barrel into the well to a point where the standing valve is on a level with the center of the producing sand. If a well gives trouble with sand in such a case as the latter, it will be necessary to use one of the above described types of pumping equipment to handle it.

"Pumping wells making an excessive amount of sand have a high maintenance cost. It would be very interesting to classify the pumping cost of the various fields of the United States according to quantity of sand produced. Depths being equal, it would unquestionably be found that the pumping cost would mount in direct proportion to the quantity of sand produced from the wells.

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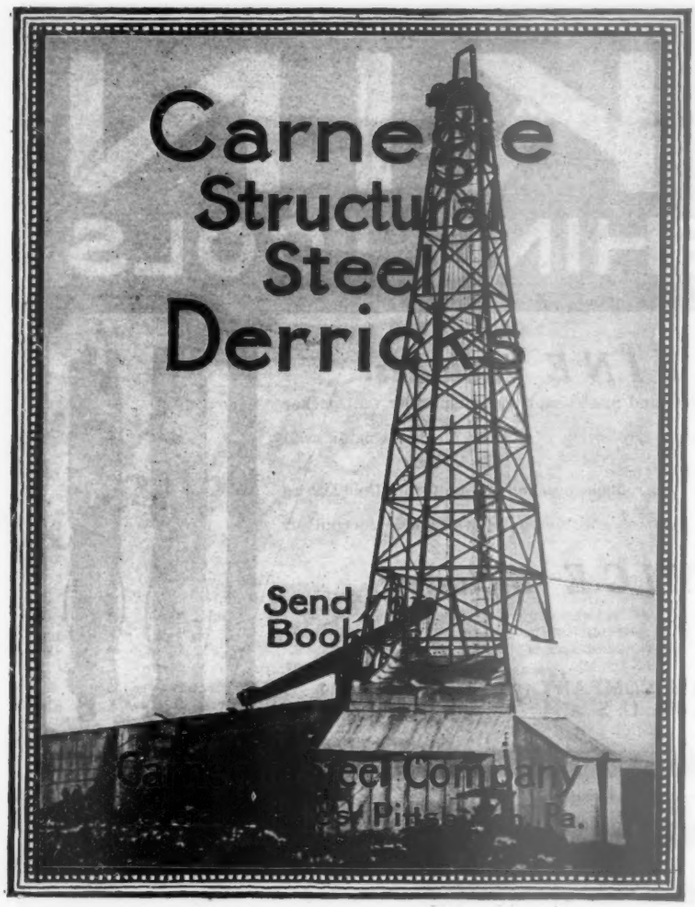

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BIG AREA IN WYOMING HAS NOT BEEN TESTED

(Continued from Page 24)

covered the structures near the mountain ranges so that they were easily seen and developed, while other districts not cut down to the Cretaceous by the erosion may contain structures hidden by the overlay.

Surrounded By Oil Fields

Examining the accompanying map of the central and northeastern part of Wyoming, it will be noted that starting at the Billy Creek Field, in the central part of Johnson County and at the base of the Big Horn Mountains, a great oval can be drawn south through several undeveloped structures to Salt Creek, then through Big Muddy, Brenning Basin, Lance Creek, Mule Creek, Osage, Thornton, (Wakeman) and Moorcroft. The central part of this great oval as shown by the outline, is covered with Tertiary so that any Cretaceous movement is effectually hidden yet there are fields lying all around the edges except at the north where the Tertiary covering extends up into Montana.

For the geologist to attempt to study this area for possible oil structures would be like trying to read a newspaper under a carpet. A great field might lie anywhere in this area and the crest comes to within only a few feet of the surface, yet it is hidden perfectly. The area is large enough to hold a dozen or more fields like Salt Creek and the same sands are in situ in all the fields around the edge. The Tertiary rests on the Cretaceous unconformably and gives no indication of what the Cretaceous below may be like.

Cretaceous Strata

The oil bearing sands of this area are Cretaceous in the main and when the Cretaceous strata were being laid down on the sea bottom in prehistoric times, the ocean currents brought the detrius of erosion from the west and flowed in a northeasterly direction across Wyoming. This fact is established by the study of these sands where they have been uplifted along the mountain ranges in the western part of the State and also along the rise of the Black Hills. In western Wyoming these sands are hundreds of feet thick because the sand dropped down there more than it did farther east. Over in Nebraska and South Dakota, the Wall Creek sands have become only thin beds a few feet in thickness and soon thin out completely. It is certain, however, that these sands underlie the whole of the great basin between the Big Horns and the Black Hills as they can be identified along the Black Hills slope. While the Black Hills are not high enough to be commonly classed as a mountain range, the uplift was caused by the same forces that brought up the great ranges of this region, only the force of upheaval failed to lift the Black Hills high enough to be classed as a mountain range. The Dakota and Lakota sands do not tend to thin out like the Wall Creeks and below these are the Carboniferous rocks that are all in place over the area under discussion.

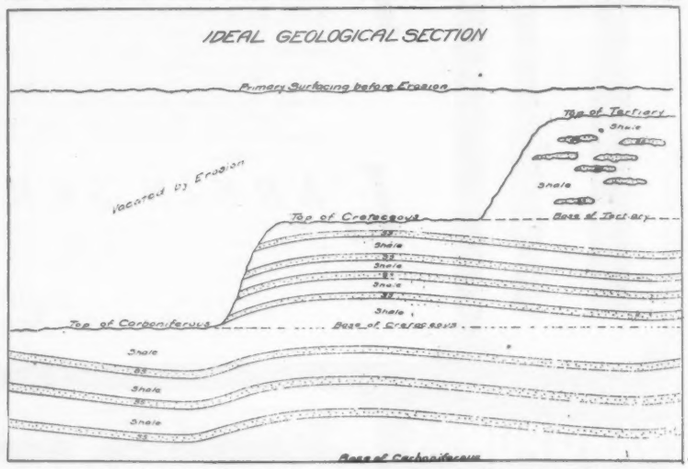
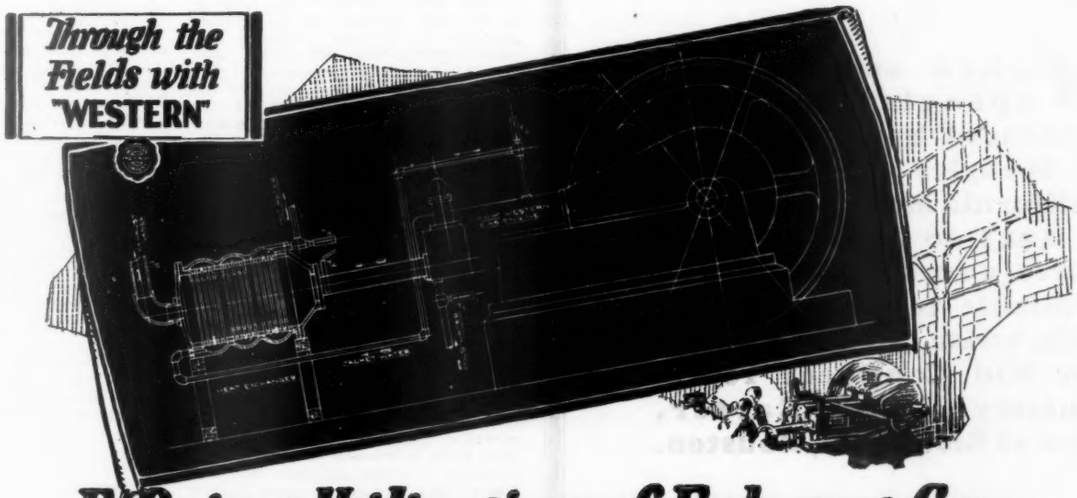


Fig. 1—Ideal geological section showing primary surfacing and effect of erosion in the Rocky Mountain region.

Up to the present, practically no drilling has ever been done in this area. Some sporadic attempts to put down tests have been made here and there by local syndicates or companies, but many of these have died before even starting to drill and others have drilled a few holes only to shallow depths. The locations for what wells were drilled, have been made by guesswork. At times a rancher or homesteader drilling a water well, finds a showing of oil or gas that creates a flurry of excitement for a time.

To examine the area conclusively, a careful search by a corps of geologists for Cretaceous outcrop would be the first step and if this were not successful, shallow wells would have to be drilled over the area, checkerboarding it in all directions and any hidden structures could then be found by comparison of the well logs. This method would entail a heavy expense that under the present leasing laws would hardly compensate the oil

Fig. 2—A Cretaceous stratum appearing on the surface through Tertiary overlay.



Efficient Utilization of Exhaust Gas Raises Thermal Efficiency of Gas Engine to 90%

There was a time when steam power was considered more efficient and more desirable than gas or oil engine power for certain purposes and under certain conditions. That, like many another good theory, is changed now due to modern progress and development of the higher types of power equipment.

It is a well-known fact that a steam engine has a very low thermal efficiency as compared to an internal combustion engine, ranging from 6% to 10% and oftentimes considerably less. Where the exhaust steam could be utilized for heating purposes, however, the total heat utilization of the fuel was raised as high as 40% and sometimes 50%, so that under such conditions it was considered more efficient than gasoline or oil engine power.

As against this, in recent tests made by Professor V. L. Maleev, M. E., D. M. E., A. S. M. E., a 160 H. P. "Western" Duplex Gas Engine in combination with an ordinary heat exchanger measuring 20"x21" cross section inside, showed complete recovery of the total heat carried away by the cooling water, and approximately 75% of the heat contained in the exhaust gas, raising the thermal efficiency of the combined installation to 90 per cent.

The complete figures recorded in these tests are very interesting indeed, and are embodied in a typewritten report made by Professor Maleev at the time the tests were made. A complete copy of the report, together with a blue print of the engine-heat exchanger installation will be forwarded to any operating company on request.

The tests themselves prove conclusively the general utility of "Western" Natural Gas Engines and their far greater efficiency under practically all conditions of service for oil country work. If you use power for any purpose whatever, investigate the records of performance and operating costs of these superior engines.

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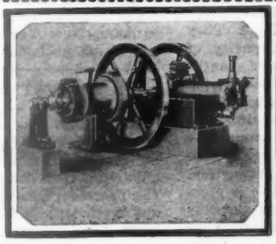

WESTERN MACHINERY COMPANY
904 North Main St. Los Angeles, Calif.

Please send me without any obligation on my part, the report of Professor V. L. Maleev covering the utilization of waste exhaust gas, together with a blue print of the "Western" Engine-Heat Exchanger installation.

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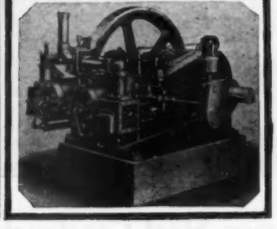

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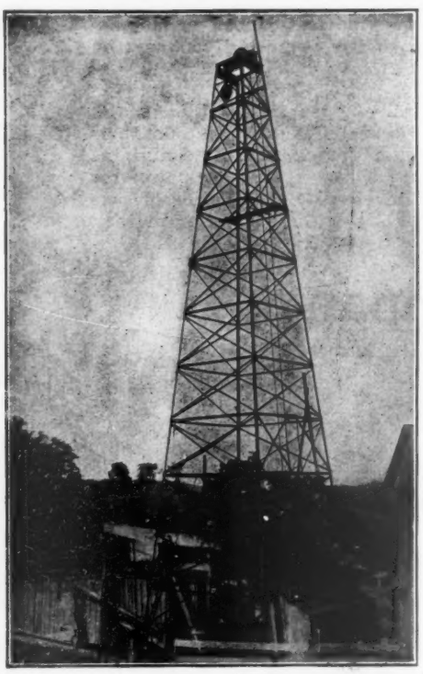

Eleven years in use and no repair parts necessary on any O'Brien derricks. They will drill your wells and pull the pipe. Will not deteriorate, your salvage will be 100% twenty-five years hence. Your wells are your bank, why not put the best structure over them you can get.

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firms to undertake. The oil companies could not take up the whole area to prospect in this way and if a number of drilling machines were to start putting down test holes on open lands, it would be an easy matter for an outside party to keep track of the holes and jump on leases when anything like a structure were found. The area as shown, contains approximately 200 square miles and at present an oil company can take up only four square miles to hold and develop under the leasing law. If the Interior Department would contract with one or two bonafide companies to prospect the area and withhold the land from entry or permit while the work was being done, it would simplify matters.

The area as outlined is by no means the only one of this nature in this State, a similar area, though smaller, lies in the central part of the Big Horn Basin and this Big Horn Basin area is almost completely ringed with fields and structures. The Red Desert area in the southwest part of Wyoming is another Tertiary overlay on Cretaceous and so far only three fields have been discovered around the edge. In Montana are many like areas that are virgin on the edges as well as in the central part. The Sunburst Field in Montana is a striking example of a hidden structure, here the Glacial and Tertiary covering seemed to preclude any chance of a possible field, but the first well, drilled by chance on what was thought to be only a small structure, if it really existed, opened an area for development that has not yet been determined. There are no surface indications whatever to tell how large Sunburst Field is going to be and the old maps that were supposed to show the field two years ago are now being discarded for ones covering more ground as the wells come in outside the supposed area.

Nothing About Oil Business Today to Warrant Pessimism

William G. Skelly, president of the Skelly Oil Co., is optimistic regarding the future of the petroleum industry. Upon his return to Tulsa from a month's trip through the East, he stated:

"The oil business is in good condition, despite lowered prices for crude and refined oils. Each month is now leading to a more sound and stable condition in every branch of the oil industry, and the slight depression we are now experiencing, I believe, is but incidental to the last processes of readjustment before really sound prosperity.

"I cannot see anything about the oil businesses today to make one pessimistic. We cannot always expect prosperity and top prices, and the present softening of prices is but the result of over-production of both crude oil and refined products.

"The producer as well as the refiner must curtail his operations until consumption has reached a parity with production. With high crude prices throughout the summer, oil men have been drilling every available location and the result is too much crude. Refiners of the country are just as much to blame. They expect to run crude to the capacity of their stills throughout the winter months and fill all their storage. When spring comes these large stocks are dumped on the market and the refiner continues to run crude to his stills at the same rate while consumption cannot always take care of this heavy gasoline production.

"When the country as a whole is prosperous, the oil industry cannot possibly be otherwise. Consumption of crude oil and its refined products is at a point never before attained and will continue to increase. Oil is one of the most essential factors in modern industry.

"The most optimistic feature of the oil situation today is the fact that demand for oils, particularly gasoline and distillates, is now very much stabilized. A few years ago we had four or five summer months when gasoline consumption was practically double that of the winter months.

"Closed cars, buses, trucks and, in particular, good roads, have changed all this and brought seasonal demand for gasoline almost a thing of the past. Distillates are growing more and more popular throughout the country for heating purposes. The oil business is thus more balanced today than it ever was before and will continue so.

"Eastern oil interests are far from pessimistic because of the peak load of California oil and gasoline which has been dumped on the seaboard market the past few months, because this heavy production of California oil is not a recent thing—they have been shipping huge quantities to the Atlantic the past 18 months.

"Mexican production is now only about 250,000 bbls. per day, whereas two years ago the Mexican oil fields were producing approximately 800,000 bbls. daily. California is only partly making up a part of the loss in Mexican oils. Smackover's output is declining and in all probability will continue to decline throughout the year.

"There are no new oil pools in sight in the Mid-Continent Field that might materially increase high-gravity oil production. There is no immediate menace of over production from any part of the country. But there is too much drilling, too much crude oil is being produced in every field of the country today. A slackening of drilling operations would quickly remedy this depression, which in the face of things, can only be temporary."

HOUSTON-GULF GAS CO. CHARTERED IN TEXAS

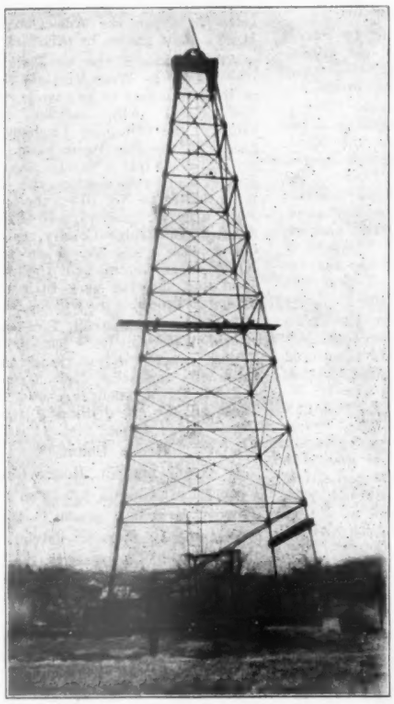
HOUSTON, Tex., Sept. 5.—Permit to do business in Texas was granted the Houston-Gulf Gas Co. of Delaware and, weather permitting, natural gas will be piped and available to Houston consumers during the month of November. Pipe for the line is en route and expected daily. The right-of-way has been secured and is being cleared. Actual construction work will begin the latter part of the week at Markham, working into Houston. Simultaneously crews will start in the Refugio gas field in Refugio County, piping this way at the same time connecting this link with all the several fields owned by the company, according to the contract with the Hope Engineering & Supply Co. This will be completed on or before December 31. According to O. R. Seagraves, secretary of the company, the entire system, weather permitting, will be completed the fore part of December.

Officers of the Houston-Gulf Gas Co., elected last week, are W. L. Moody, Jr., Gasleston, president; R. S. Lord, Mount Vernon, Ohio, president Hope Engineering & Supply Co., vice president; W. L. Moody, III, Galveston, vice president and treasurer; O. R. Seagraves, Galveston, secretary, and E. C. Connor, general manager.

Two additional directors have been added to the directorate. They are C. B. Ewart of Taylor, Ewart & Co., Inc., bankers, New York, and H. H. Adams, consulting geologist, Fort Worth.

TO TEST SOMALILAND

Regarding the petroleum possibilities of Somaliland, Africa, where there are indications of some promise, R. A. Farquharson, Government geologist, says all the necessary geological and survey work has been done and suitable drilling sites have been selected. Estimates of cost of the necessary machinery have also been obtained and the cost of drilling estimated. All that is now needed is to bring the machinery on the ground and to engage a competent drilling master to superintend the work.



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NO-OX-ID functions perfectly on steel tanks, both large 55s and 80s. Also on lease storage of crude oil tanks.

Use it on bottoms exposed to soil, and on first ring up from ground level. Use it inside, on the sixth or top ring to prevent corrosion of exposed surfaces by corrosive gases. Also use it on the top angle and inside steel rafter girders, and on the interior side of steel sheet roofing. Demonstration and abundant proof supplied gladly. Write!

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It runs around in circles. It doesn't know where it's going, but it's on its way.

When a dog goes mad, it climbs trees, jumps ash-cans and acts up generally.

But when a tool bucks or a cutter-wheel breaks in the middle of a job

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Sales Representatives in All Principal Fields

EASTERN FIELDS

(Continued from Page 36)

the Dora E. Wagner farm. In Sardis district, Harrison County, the Philadelphia Co. has the rig completed for a test on the George Davisson farm.

In Grant district, Pleasants County, the Dresser Oil Co. has completed in the second salt sand, No. 9 on the R. J. and R. N. Corbitt farm. It is a duster. In Walker district, Wood County, the Power Oil Co.'s No. 110 on the Volcanic tract is a 3-bbl. pumper in the salt sand. On McElroy Creek, McClelland district, Doddridge County, Trainer Brothers & Ash are drilling down from the Big Injun to the Gordon sand their first test on the W. E. Ash farm.

In Greenbrier district, the Champion Oil Co. failed to recover the tools lost in No. 8 on the Isaac Eddy farm and abandoned the hole. In Central district, the Carter Oil Co.'s No. 3 on the W. H. Hufford farm is good for 8 bbls. a day in the Big Injun sand. In West Union district, C. H. Pigott's second test on the Benjamin Heflin farm is good for 15 bbls. a day. In the same district, the Murphy Oil Co. has a 30-bbl. producer in the Big Injun sand at No. 3 on the A. K. Rollins farm. In Collins Settlement district, Lewis County, Roy Horner's second test on the Minter Lawson farm is a gasser in the Gantz sand.

Putnam County

On the waters of Poplar Fork, Scott district, Putnam County, W. H. Kirtley and others completed and shot in the salt sand a second test on the R. H. Davis farm, good for 5 bbls. a day. On the same stream and same district, the Ohio Fuel Oil Co. has started to drill a test on the P. R. Kearn lot. W. H. Kirtley & Co. have a rig completed for a test on the J. S. Frazier farm. On Little Grave Creek, Union district, Marshall County, Cole & Campbell have the rig completed for a second test on the Bertha Orum farm.

Boone County

On the waters of Joes Creek, Sherman district, Boone County, the Pure Oil Co. completed and shot in the Berea grit, No. 211 on the Williams Coal Co.'s tract, and good for 25 bbls. a day. On the same stream and same county, the same company has completed and shot in the same formation, No. 25 on the Lafollette, Pitchard & Robeson tract, and good for 25 or 30 bbls. a day. The Pure Oil Co. has rigs completed for No. 213 on the Williams Coal Co. tract and Nos. 6 and 17 on the Lafollette, Prichard & Robeson tract.

On Worthington Creek, Union district, Wood County, the South Penn Oil Co.'s No. 9 on the L. M. Newbanks farm is drilling in the Berea grit and showing for a 5-bbl. pumper. In Union district, Ritchie County, the Carnegie Natural Gas Co. drilled its test on the Carrie E. Richards farm from the Maxon sand to the Big Injun. It is a gasser in the lower sand. In Grant district, the Mellon Oil Co.'s No. 3 on the W. E. Conaway farm is a gasser in the Berea grit. In the same district, the Hudson Oil Co.'s No. 38 on the United Stewart Oil Co.'s lease is a 2-bbl. pumper in the Maxon sand.

Gassers in Lincoln County

In Carroll district, Lincoln County, L. R. Sweetland has a gasser in the Berea grit at No. 6 on his own farm. In the same district, Baker Brothers have a gasser in the same formation at No. 3 on the Hal Baker heirs' farm. In Duval district, the Foote Oil & Gas Co.'s test on the Rachel Barrett farm is a gasser. In Jefferson district, the Carter Oil Co. completed a gasser on the Louisa Abbott farm. In the same district, the Tampico Oil & Gas Co.'s No. 6 on the Pike heirs' farm is a gasser in the Berea grit.

On Bear Run, Grant district, Ritchie County, the Griffin Producing Co. completed and shot in the salt sand, No. 37 on the Kennedy Oil Co.'s tract, good for 8 bbls. a day. In Murphy district, Bradin & Britton completed a test on the Margaret Conrad farm, a light gasser in the Big Injun sand. On Gillespie Run, Grant district, T. A. and E. P. Mellon completed and shot in the Berea grit, No. 3 on the Ada Conway farm. It is a light gasser in this formation.

At the close of the week all late completions in the West Virginia fields came in light pumpers or gas wells. On Ruffner Fork, Elk district, Kanawha County, the Columbia Carbon Co. completed in the Big Injun sand, No. 7 on the C. W. Vickers farm. On the same stream and same district, the same company drilled in No. 10 on the same farm. Both are fair gassers. In New Milton district, Doddridge County, the Raccoon Oil & Gas Co.'s No. 4 on the James Kelly farm is through the Big Injun sand and showing very little oil. If it makes a producer it will be very small.

In Lafayette district, Pleasants County, the Wiser Oil Co.'s test on the R. H. Wilson farm is a fair gasser in the salt sand. In the same district, the American Oil Development Co. and the South Penn Oil Co. is drilling a test on the Perry Riggs farm.

Roane County

In Geary district, Roane County, the United Fuel Gas Co.'s test on the H. H Tawney farm is a gasser in the Big Injun sand. In Spencer district, the Carter Oil Co. has a gasser in the same formation at a test on the A. J. Meadows farm. In the same district, F. F. McIntosh's second test on the Charles Hanger farm is a Big Injun sand gasser. In Lee district, Calhoun County, the Hope Construction & Refining Co. has a light show of oil in the Big Injun sand at a test on the John Bell farm. The American Oil Development Co.'s No. 4 on the J. C. Allen farm, in McElroy district, Tyler County, is a gasser in the Big Injun sand. In Liberty district, Marshall County, the Manufacturers Light & Heat Co. has a Gordon sand gasser at a second test on the Lucinda Burge farm.

Test Wells Drilling

In Union district, Marshall County, Campbell & Cole have started to drill a test on the Bertha Orum farm. In Liberty district, the Manufacturers Light & Heat Co. has made a location on the Thomas and Sarah Blake farm. In Center district, Wetzel county, the Hope Natural Gas Co. is rigging up on the J. O. Riter farm. In Ellsworth district, Tyler County, Lloyd Correll has started to drill on the Catherine Morrow farm. In Geary district, Roane County, Douglass Brothers are building a rig on the P. C. Adams farm. In Reedy district, the Heck Oil Co. has started to drill on the J. W. Carson farm. In Smithfield district, the United Fuel Gas Co. has rigged up on the G. W. Sarver farm and waiting for water. In Jefferson district, Lincoln County, the Carter Oil Co. has rigged up on the Charles Stowers farm. In the same district, the Pure Oil Co. has made a location on the George C. Weimer farm. In McComas district, Cabell County, the Grant Gas Co. is due in the sand on the T. and B. Swann farm. In Central district, Doddridge County, the Hope Construction & Refining Co. is building a rig on the H. B. Williams farm.

Southwest Pennsylvania

The Southwest Pennsylvania fields had nothing better than gassers to offer at the close of the week. In Perry Township, Greene County, J. H. McDermott drilled his test on the McClelland-Wright farm through the Bayard sand and showing for a light pumper. In the same township, the Peoples Natural Gas Co. has a fourth sand gasser on the Warren Pyles farm. In Whitely Township, the same company has a gasser on the Warren Pyles farm. In Whitely Township, the same company has a gasser in the Big Injun sand at a test on the W. A. and M. Rinehart farm. The Carnegie Natural Gas Co.'s well on the C. K. Spragg farm, in Morris Township, is a gasser in the Gordon sand. In Springhill Township, Stockdale & Co. drilled deeper a second test on the Morford heirs' farm and the hole filled up 400 feet with fluid.

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B & B Patentsteel Drilling Lines are extra pliable—absorb the vibrations. Stand up well to the bends over drum and sheave. Do not kink easily. Extra elastic, B & B Patentsteel Lines drill ahead of the tools and make hole faster. Extra strong, they last longer and cost less.

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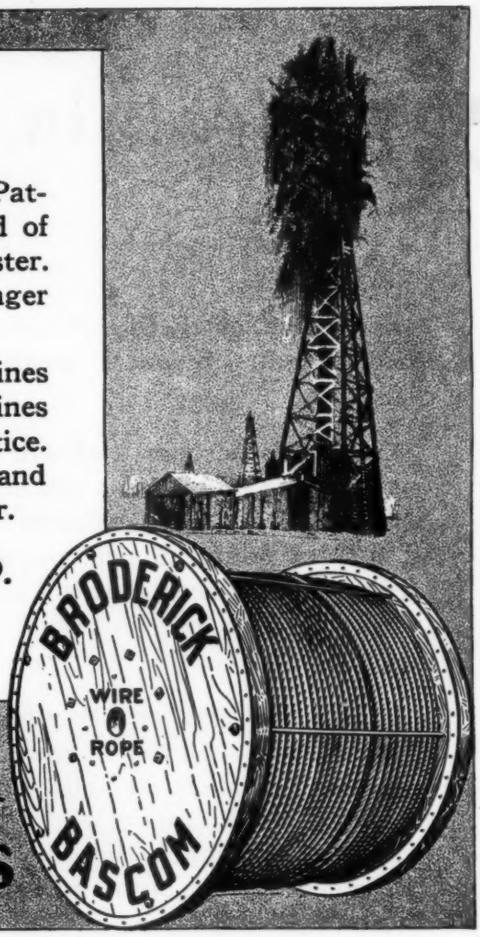

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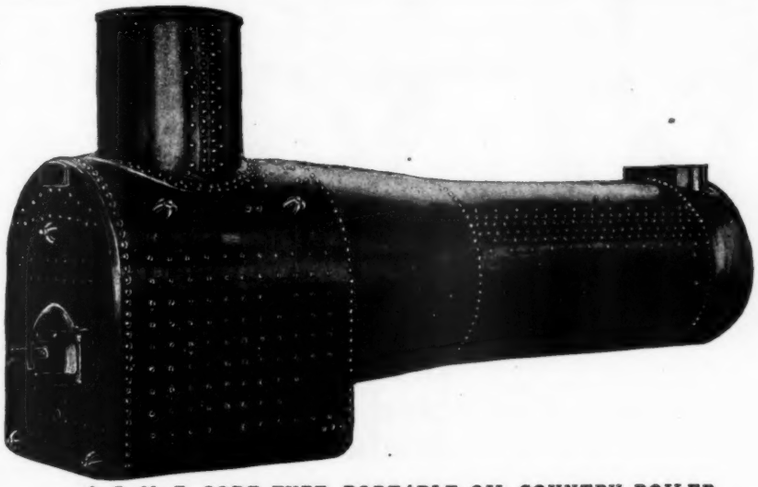

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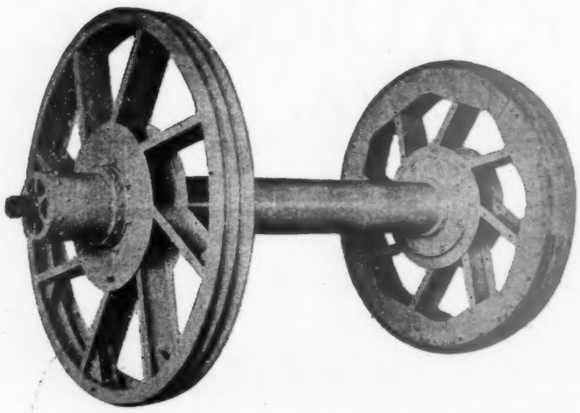
"There are bull wheels and bull wheels," said Bill, the "Guesser," wearily as he talked.

"There are the ones that will get you right in the middle of a job and break down, or keep you sweating for fear something might happen, and there are ordinary bull wheels that will slip a rope whenever you put a heavy load on them."

"And then there are Bradford Steel Bull Wheels—you can depend on them—as steady and dependable as the Rock of Gibraltar. I'd rather work at smaller wages on a job where there's a Bradford bull wheel than be bothered with one of those ramshackle ones."



Bradford Steel Products

Steel Calf Wheels
Steel Band Wheels
Steel Crown Blocks
Steel Tug Rims

BRADFORD RIG & REEL CO.
TULSA OKLAHOMA

CALIFORNIA FIELDS

(Continued from Page 48)

tion 28-11-20, at 2,636 feet, and it is understood the company will devote its attention elsewhere for the present. The Standard has also reduced its drilling program in this area, due to several recent disappointments.

Rosecrans

There were two new wells finished at Rosecrans during the week, but their completion was of minor importance when compared with E. J. Miley's No. 6 Athens, a deep test in the northern part of the field. Miley established a new rotary record during the week by carrying this hole down to 7,430 feet, an even 111 feet deeper than the previous record holder, No. 1 Gardena of the Union at Dominguez, abandoned at 7,319 feet. Miley is credited with coring 127 feet of oil bearing formation picked up at 7,305 feet, and it is his intention to produce from this depth, if at all possible. So far Miley has been unusually lucky with this test, which has been carried down to 7,430 feet in 183 actual drilling days. Cement jobs required eight days' time, while ten were lost in fishing and milling and five used in making up drill pipe and repairing the rig. The time required to extract 135 cores is included in the actual drilling time of 183 days.

Several new engineering problems are presented, included in which is the job of shutting off water and producing from this extreme depth. Miley expects to use a string of 4¾-inch, to be landed around 7,300 feet, thus establishing a new record for length and weight. The string will be floated in by plugging the bottom of the pipe, and by using this size casing mechanical trouble will be reduced to a minimum. If Miley succeeds in landing the oil string and effecting a water shut off, his engineers will probably spend some little time endeavoring to secure commercial production, as it is not believed that a natural flow will be secured.

Two More Producers

The two succesful completions added this week were W. H. Fisher's No. 14 Athens and the Golden State Refining Co.'s No. 1 Athens. The former was drilled to 4,475 feet and finished with a 4½-inch oil string carrying 277 feet of 80 mesh screen, while the latter was carried down to 4,753 feet and finished with a 6¼-inch oil string landed on bottom. Fisher's No. 14 Athens came in flowing 505 bbls. of 26.2 gravity oil cutting 10 per cent, while the Golden State's No. 1 Athens was good for 560 bbls. of 27.3 gravity oil, cutting 6 per cent. Fisher still has three drillers in this area, No. 11 at 4,425 feet, No. 12 at 4,483 feet, and No. 13 at 3,986 feet, all of which are held up with mechanical trouble. The Marine Oil Corp. put No. 38 Athens on a production test at 4,895 feet but, since the initial output, gauged at 872 bbls., cuts 60 per cent water, it cannot be considered as a finished completion. The well will probably be killed during the coming week in order that another cement job may be made.

No. 3 Athens of the Henderson Petroleum yielded several splendid cores between 4,994 feet and 5,017 feet, and as a result preparations are being made to land a string of 8¼-inch. This hole for a while looked rather discouraging but has recently taken on a little better outlook. The company's No. 2 Athens is standing recemented in a shale and oil sand at 5,288 feet and is scheduled for an early test. The California Petroleum is making satisfactory progress with No. 2 Kreitz, which is going ahead at 4,290 feet, and No. 3 Kreitz at 4,339 feet, both of which look good for deep production within the next 30 days. The Fullerton Oil Co. secured an effective shut off on the 8¼-inch at 4,245 feet and an early test is contemplated. This hole does not look any too promising for production at the present depth.

The Union should appear on the completion list with two or three new wells on the Howard Park property during the next few weeks, as several are going ahead in the oil sand, while one or two others are held up with water trouble which will be overcome by another cement job.

The Burnham Exploration Co. has temporarily suspended drilling on its outpost, No. 2 Wagner, in order that a thorough study may be made of the situation before proceeding farther. The Chanslor-Canfield Midway Oil Co. is still held up with mechanical trouble resulting from the freezing of drill pipe at 4,833 feet. Efforts are being made to circulate loose with oil and it looks as though some little time will be required before the company is in a position to resume drilling. The Pan-American is going ahead with its No. 2 Anderson, a wildcat in the extreme northern part of the district, at 5,425 feet, but has yet to find even a color.

Torrance

The Chansior-Canfield Midway Oil Co. sprung quite a surprise at Torrance by bringing in No. 81 Del Amo, flowing 740 bbls. of 18.1 gravity oil cutting 2 per cent. This is the largest producer finished at Torrance for some time and is particularly encouraging because the Del Amo property is generally regarded as productive of only small wells. The hole was carried down to 3,500 feet and finished with a 6¼-inch oil string carrying 700 feet of 80 mesh screen. The company's No. 106 Del Amo was a 120-bbl. pumper from 3,544 feet, the oil testing 18.2 gravity and showing a cut of 3 per cent. The hole was finished with an 8¼-inch oil string carrying 610 feet of 80 mesh screen. Several additional wells are being drilled on this property, and judging by their present depths, No. 69 should be the next completion listed. The Marine's No. 52 Torrance is credited with 95 bbls. a day of 17.6 gravity oil. It was put on the beam at 3,820 feet after being finished with 6¼-inch liner carrying 160 feet of 60 mesh screen. The Shell is erecting two new rigs on its Torrance lease in this area, the wells being designated as Nos. 6 and 7. On the Frenger lease, No. 5 is standing cemented at 3,600 feet, while No. 4 at 3,595 feet will be bailed for production tomorrow after being finished with a 6¼-inch oil string landed on bottom.

The Linden Oil Co. finished its first successful completion at Long Beach and secured a 430-bbl. well, the oil testing 23.5 degrees and showing a cut of 4 per cent. It was drilled to 4,620 feet and finished with a 6¼-inch oil string carrying 445 feet of shop perforated. Fred Walker's upper zone producer, which was only good for 110 bbls. a day from 3,160 feet, was quite disappointing as at least a 250-bbl. pumper was anticipated. The United Oil Co. has purchased the property and holdings of the West Coast Oil at Long Beach, which consist of one pumper averaging around 175 bbls. a day and a location for another hole, which the United will probably drill in the near future. Bassett-Roerick & Myers finished their No. 1 at 4,429 feet and the initial pumping showed it good for 90 bbls. of 23.6 gravity oil. The California Petroleum Co.'s No. 15 Fields, a new well, looks quite promising at 4,434 feet and if the present showings continue should appear as an early completion. The Casa Blanca Oil Co. is making preparations to redrill and deepen its well No. 1, now at 4,948 feet, believing that a little more hole will result in commercial production. The Marine Oil Corp.'s No. 7, which has produced in excess of 2,000,000 bbls. of oil, is scheduled to be cleaned out and put on the beam as its flowing days are believed to be at an end.

Dominguez

The Marland's deep test at Dominguez, No. 7, is going ahead at 6,090 feet in a gray sand streaked at times with shale. The predominating formation for the last thousand feet or so has been a gray sand and unless some change is noted very shortly, the well will be placed in the doubtful column. The Shell is starting another hole on its Reyes lease, No. 31, and actual spud will be made shortly. This lease already has three drillers, No. 27-A, at 3,685 feet, No. 29 at 4,200 and No. 30, at 3,100 feet. The Union is plugging back No. 5 Callender at

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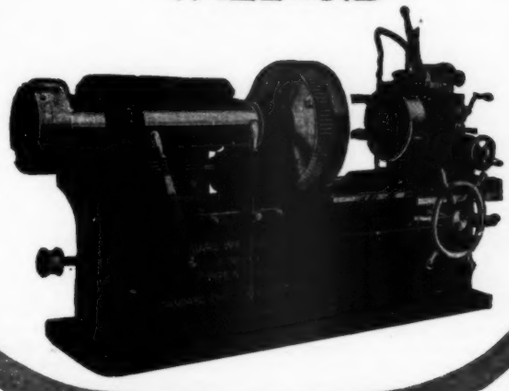

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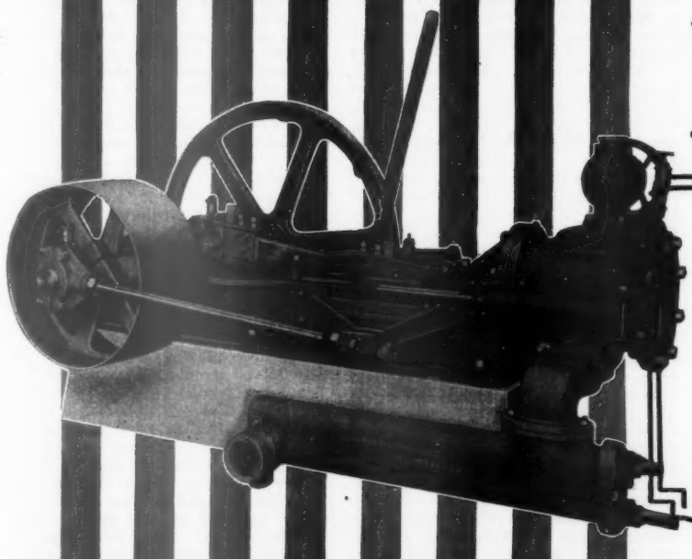

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4,878 feet in an attempt to exclude what is believed to be bottom water. No. 8 on this lease will be bailed for a test within the next few days at 4,270 feet. No. 10 is drilling ahead at 1,542 feet and since a new rig is going up for No. 13, additional work is evidently contemplated. On the Hellman lease, No. 12 has just been finished as a 506-bbl. well, the oil testing 28.1 degrees and showing a cut of 1 per cent. It was completed at 4,224 feet and finished with a 6¼-inch oil string landed on bottom.

The Standard has added another new well to its list of producers at Huntington Beach by completing No. 28 on lease B. It was a 160-bbl. pumper, the oil testing 21.4 degrees and showing a cut of about 20 per cent water. The output is rather unsatisfactory but the well is being passed along to the production department for the present. The completion depth is 4,665 feet, a 4½-inch oil string being used to finish the hole. The company has turned its attention to No. 5 Thompson and is preparing for a test after redrilling and deepening it to 3,389 feet and finishing the hole with a 6¼-inch carrying 170 feet of 120-mesh screen. The Richland Oil Co. did not succeed in spudding in on September 1 as was anticipated but should be in a position to start operations within a short time. The Associated is getting ready to drill another well on its Miley-Keck property to be designated as No. 50. It will be located at the intersection of Clay Street and Huntington Avenue and an offset to the Olig Crude Oil Co.'s No. 1 Moss. The Associated put No. 2 Wardlow on a production test at 3,756 feet and finished it as a 100-bbl. pumper, the oil testing 22.3 degrees and showing a cut of 4 per cent. The United Oil Co. has closed a deal with the Barnett Anchor Oil Co. whereby it takes over the operation of this company's two Huntington Beach producers and resumes work on a suspended driller. The Sun Oil Co. should be in a position within a week or two to make a production test of its well No. 6 which looks good for completion as a small pumper.

The Brea Canyon Oil Co. finished its No. 37 in the Fullerton Field at 4,682 feet, using an 8¼-inch oil string carrying 1,272 feet of shop perforated and 3,414 feet of 2½-inch tubing. It came in doing 1,400 bbls. a day, flowing through a ½-inch bean under a pressure of 700 pounds. It is quite evident, however, that a shut off has not been secured as the output is cutting about 40 per cent water. The Union landed a string of 12½-inch casing in its Fullerton wildcat, No. 2 Olinda, at 2,599 feet, the bottom of the hole being 2,741 feet. No. 1 Olinda, another wildcat in this area, is sidetracking 1,060 feet of 6-inch drill pipe lost at 2,853 feet. The Fullerton Oil Co., whose well No. 19 is in a hard oil sand at 4,960 feet, is swedging out a bad spot in the 8¼-inch and as a result the production test will be temporarily delayed. The Shell has recovered the fish lost in No. 3 Fisher at 4,277 feet and is cleaning out preparatory to resuming work. The Chiksan Oil Co. is still held up with its two Richfield wells. No. 3 Bradford, plugged back to 4,800 feet, and No. 4 Bradford bridged to 4,220 feet. The Union spudded in No. 4 Coyle & Bogue in this area and is reaming at 450 feet preparatory to landing a string of 12½-inch casing. No. 6 Thompson of the General Petroleum was given a try at 4,633 feet after being finished with a 4½-inch oil string carrying 840 feet of perforated. Flowing through a 5/8-inch bean under a pressure of 500 pounds, it tanked during the first 24 hours 790 bbls. of 23.8 gravity oil cutting 5 per cent. No. 20, on Kraemer lease No. 2 of the Standard, is going ahead rather slowly at 998 feet as the result of a hard formation.

The St. Helens Petroleum is still going ahead in its two drillers at Montebello. No. 9 Monterey at 3,650 feet and No. 2 Mulholland at 4,000 feet, both of which have looked promising at times. No. 62 Baldwin of the Standard is being pushed ahead in a hard sand at 4,756 feet. The McGinley Oil Co. has recemented its well No. 19 at 3,145 feet but is going ahead in its other two drillers, No. 17 at 2,230 feet and No. 21 at 2,745 feet. The California Petroleum is rigging up No. 2 Hamburg at Rideout Heights and will drill for shallow production following several unsuccessful attempts to develop a deep zone. The Ocean View Oil Co.'s well No. 2, which is being deepened by Walter P. Temple, has just passed 4,655 feet and, while there have been one or two colors, the showings noted to date have not warranted a test. The Associated will make a production test tomorrow of its No. 101 Fox in the Beverly Hills section of the Salt Lake Field at 4,970 feet, but it is not believed that commercial production will be secured under present conditions.

Ventura

The Shell added another well to its producing list in the Ventura Avenue Field during the week by bringing in No. 14 Gosnell from 4,760 feet after finishing the hole with a 5-7/8-inch oil string carrying 924 feet of 80-mesh screen. The well came in flowing at the rate of 200 bbls. an hour but the total production for the first day aggregated 4,450 bbls., the oil testing 28.5 degrees and showing a cut of 5 per cent. There are six other wells on this lease, No. 7 at 4,821 feet, No. 8 at 5,082 feet, No. 3 at 3,885 feet, No. 10 at 4,210 feet, No. 16 at 3,842 feet and No. 17 at 4,100 feet. On the Taylor property the Shell has No. 9 at 4,738 feet and a rig going up for No. 10, while the Edison property is credited with one driller, No. 3 at 4,175 feet. On the Notten property the General Petroleum has three drillers, No. 7 at 3,680 feet, No. 8 at 2,736 feet and No. 9 at 3,740 feet. None of these look good for early production but No. 4-A Barnard, which cored a shale streaked with an oil sand at 4,304 feet, gives promise of resulting in production within 30 days. The Chanslor-Canfield Midway Oil Co.'s wildcat, No. 1 Hobson, is standing cemented at 560 feet. E. J. Miley's test on Red Mountain, Section 7-30-23, is going ahead slowly in a hard sand at 2,145 feet. The Oakridge Oil Co.'s Ventura County test on Section 12-3-21 is in a sticky blue shale at 5,300 feet. This hole has so far been devoid of any showings of importance. The Ring Oil Syndicate has temporarily suspended work in No. 1 Converse on South Mountain, Section 23-3-21, at 3,770 feet. The Tehmescal Petroleum is cleaning out well No. 1, a shallow producer from 1,760 feet and getting ready to finish No. 2, which is at present in a hard sandy shale at 1,740 feet.

Southern California Wildcats

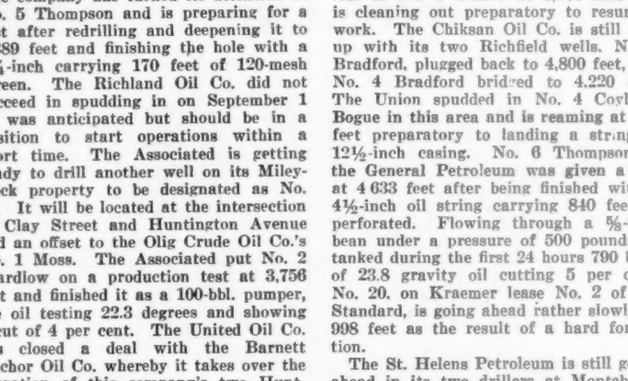
The Associated reports a depth of 5,312 feet in No. 1 Hellman, its wildcat at Seal Beach. The company logged a slight showing at 5,230 feet and, while it was only of minor consequence, it was a little encouraging and should result in early work on a new test more favorably located. No. 3 Bryant of the Shell, the deepest hole in this area, is going ahead at 6,625 feet, the formation at this depth being a gray sand streaked with shale. No. 2 Bryant is making hole in a similar formation at 5,530 feet. The Marland is still marking time on its Bixby lease and, although grade has been made for its initial test, material has not yet been hauled in. The Oakridge has landed a string of 11-inch in No. 1 Couts, at Bandini for protection purposes at 3,650 feet, the only showings to date being a little gas at 3,455 feet. The Bandini's No. 4 DeBaker is in a hard shale at 2,200 feet, while No. 1 Vail of Superior is in a gray sand at 3,350 feet. The latter has secured some new acreage at Belvedere Gardens by working up a community lease consisting of about 50 acres and it is understood the company will attempt to develop shallow production somewhere between 2,000 and 2,500 feet. The Elbe Oil Co.'s Culver City wildcat, which is drilling ahead at 2,300 feet in a hard gray sand, is looking rather discouraging. The Midway Gas Co., attempting to develop gas production at Hawthorne, is drilling ahead in No. 1 Leuzinger at 3,325 feet. The Calny Oil Co. is changing from rotary to cable tools at Irvine and will probably resume drilling at 4,247 feet within a few weeks. Final abandonment work has been started on the hole of the Petroleum Producers Syndicate at La Mirada, which has been standing suspended for some time at 5,500 feet. No. 1 Stubbs of the Shell, also in this area, is reported at 5,937 feet and scheduled for abandonment at this depth. The Associated recovered from a fishing job of several weeks duration in its Newhall wildcat and is at present making hole at 5,240 feet with the outlook rather discouraging. No. 1 Saugus of the Union at Newhall is down 2,900 feet. No. 1 Crest of the Petroleum Securities at Palms is still held up with mechanical trouble at 3,767 feet, but No. 1 Narbonne of the same company at Palos Verdes is going ahead at 900 feet. The Milham's Playa Del Rey test is getting quite deep and is in a brown shale at 5,060 feet. No. 1 Von Schriltz of the Standard at Santa Ana Gardens, is in a hard gray sand at 4,091 feet and has yet to pick up its first showing.

Northern California Wildcats

The production test scheduled to be made early this week on the Chanslor-Canfield Midway Oil Co.'s Delano wildcat did not take place and no information is available as to what the next move will be. It is generally conceded that the outlook does not look any too promising. The Standard's test in the Buttonwillow region north of Lost Hills, Section 12-25-26, is still standing cemented at 2,880 feet, a string of 10-inch having been landed at this depth for protection purposes. Out on the McKittrick front, Section 25-29-21, the same company is drilling ahead at 3,700 feet in one of its tests and making hole in the other at 3,200 feet. The formation of each is reported as a blue shale. The Main Oil Co.'s wildcat at Wasco, which blew in several months ago making approximately 5,000,000 feet of dry gas, staged another little blowout during the past few days while the crew was cleaning out the hole.

The well was soon put under control, however, and is at present standing under a pressure of 600 pounds. The company is hauling in rig timbers for another test which will probably be spudded within the next 30 days and, although there is only a small chance of developing oil production the company may be successful in securing commercial gas production.

It begins to look as though the Associated will have a chance to charge up three or four wildcats in the San Joaquin Valley against its profit and loss statement for this year. Neither one of the company's tests at Raisin City looks at all encouraging, in fact drilling has already been suspended on Section 26-15-18 at 6,080 feet. Work is still going ahead, however, on Section 14-15-18, where the bit is down 6,100 feet in a brown shale. At Caruthers on Section 15-16-19, the company is drilling ahead in a hard sand at 4,120 feet, while the test at Kerman, Section 35-13-26, is reported at 5,100 feet in a sandy shale. The General Petroleum is redrilling its Kettleman Hills test, Section 28-22-18, at 5,950 feet, the bottom of the hole being 6,407 feet. On Section 12-23-17, the Marland is redrilling at 5,312 feet, using cable tools. No. 1 Pezzoni of the General Petroleum in Santa Barbara County, is down 2,705 feet, but no new footage is being made as the hole is being cleaned out. The Marland's test in this county on Section 32-9-32, is standing cemented at 2,645 feet. E. J. Miley is plugging back his No. 1 Smith in San Luis Obispo County from 2,020 feet to 1,300 feet and will make a test at this point before pulling out. The Harriman-Jones Oil Co. in Monterey County, Section 20-19-6, which reported gas and oil showings a few weeks ago, has resumed drilling and is making hole at 3,900 feet. The San Martinez Oil Co.'s test in Yolo County, Section 36-11-1, which hit a red shale at 4,006 feet, is looking rather discouraging, as not even a rainbow has yet been seen.



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MEXICAN FIELDS

(Continued from Page 46)

gray lime at 1,600 feet; its No. 9 Guiterrez, has cemented 8-inch in the same formation at 1,300 feet; No. 7 Zurita is in hard shale at 645 feet, and its No. 5-A, Lot 6 Camoloto is in blue shale at 885 feet. Mexican Gulf Oil Co.'s No. 8 Zuniga, is in gray lime at 1,750 feet; its No. 3 Esterillos is in white lime with a showing of oil at 2,300 feet. National Oil Co.'s No. 19 Chijoles is cementing 8-inch in grey lime at 1,670 feet, and this also applies to No. 22 at 1,788 feet; its No. 40 is in gray lime at 1,520 feet. In the Herradura sector, its No. 4 has cemented 8-inch in gray lime at 1,600 feet, and No. 8 there is drilling in gray lime with a showing of oil at 2,350 feet. Transcontinental Petroleum Co.'s No. 23 Barbarena cemented 12½-inch in gray shale at 510 feet.

Cacalilao

In the Cacalilao sector of the northern fields, International Petroleum Co.'s operations in Lot 5 follow: Number 131 is in gray lime at 2,405 feet; No. 144 is in shells at 1,025 feet; Nos. 213 and 214 are in gray lime at 1,530 and 2,170 feet respectively; No. 217 is in the same formation at 1,402 feet; No. 220 is in lime at 2,088 feet; No. 221 cemented 8-inch in the San Felipe at 1,210 feet; No. 223 is in gray lime at 1,300 feet; No. 224 is in shells at 1,188 feet; No. 227 is in gray shale at 370 feet, and three more tests are preparing to spud. Turner and others' No. 3, Lot 1, is in the San Felipe at 1,635 feet. Transcontinental Petroleum Co.'s operations in Lot 4 follow: Number 204 is in gray lime at 1,875 feet; No. 212 is in the same formation at 1,720 feet; No. 213 cemented 8-inch in the San Felipe at 1,200 feet. In the Paciencia, adjoining Lot 4, No. 22 is in gray shale at 220 feet; No. 33 cemented 10-inch in the San Felipe at 1,215 feet.

South Fields

In the south fields Huasteca Petroleum Co.'s No. 60 Cerro Azul is in brown shale at 1,265 feet; No. 67-A is in the same formation at 1,221 feet. In Casiano No. 14 is in shells at 1,480 feet, and No. 2 La Laja is rigging. Agwi Co.s' No. 40 Laguna de Tamiahua, is fishing a bit in brown shale at 1,490 feet. International Petroleum Co.'s No. 51 Toteco is in gray lime at 2,223 feet. Mexican Eagle Oil Co.'s No. 47, Lot 120 Amatlan, is in gray lime at 1,843 feet; its No. 26 Alazan continues in basalt at 300 feet; its No. 21 Cerro Veijo is in shale at 1,875 feet; its No. 24, same, is in gray shale at 588 feet; and down in Furbero its No. 35 is in gray shale at 1,585 feet. The status of other south fields active tests remain unchanged since the last report.

Ebano

In the Ebano sector of the northern fields, Mexican Petroleum Co.'s operations in its Chapacao follow: Number 7 is in gray lime at 1,570 feet; No. 27 cemented 8-inch in the same formation at 1,389 feet; No. 38 is in brown lime at 2,400 feet; No. 41 is in gray shale at 940 feet; No. 42 is in blue shale at 85 feet. In the Chijol, its No. 34 is in the Tamasopa at 2,115 feet; No. 35 is in blue shale at 785 feet; No. 36 is in white lime at 1,200 feet. In the La Dicha its No. 39-A is in blue lime at 1,760 feet; No. 63 is in gray shale at 1,095 feet; and its No. 10 La Pez is in shells at 1,275 feet.

Northern Miscellany

In the Corcovado district of the northern fields operations follow: La Corona Petroleum Co.'s No. 13, Lot 6 Corcovado, is in white lime at 2,100 feet. International Petroleum Co.'s No. 9, Lot 6, is in gray lime at 2,150 feet. Mexican Gulf Oil Co.'s No. 13 Chapacao, is in the San Felipe at 1,250 feet, and its No. 19 is in yellow clay at 90 feet. Transcontinental Petroleum Co.'s No. 14, is in gray lime at 2,090 feet; No. 18 is in hard gray shale at 1,275 feet; No. 21 cemented 8-inch in the San Felipe at 1,480 feet; No. 22 has done the same with 10-inch in gray shale at 450 feet.

In the Marland Field, Cia Petroleum Franco Espanola, No. 32 Limon, is in shaley lime at 1,540 feet; its No. 34 is in gray shale at 1,002 feet; No. 35 is in gray lime shells at 1,550 feet and No. 36 is rigging.

In Los Esteros, American International Fuel Co.'s No. 18 is in white lime at 1,858 feet and it is rigging for Nos. 20 and 21. In the Topila district, Ita Mex Oil Co.'s No. 15 La Mula got the Tamasopa limestone at 2,370 feet, and is now drilling with a showing of oil and gas at 2,404 feet. Mexican Oil Co.'s No. 6, Lot 19, Tamboyoche, has had to fish 1,000 feet of drill stem out of a 2,000-foot hole, hence it has made no progress.

In its Chapacao right-of-way, National Lines' No. 17 is in gray lime at 1,550 feet, with the hole full of oil; its No. 18 cemented 8-inch in gray lime at 1,245 feet and No. 19 is in gray shale at 700 feet. In its Federal zone wells, No. 24 E. Maguabes cemented 8-inch in gray lime at 1,700 feet; No. 26 W. Maguabes is rigging, and No. 25 Tanchicuin is in gray shale at 1,025 feet.

At Laguna de la Puerta, just north of Tampico, Mordelo Vincent's No. 1 Casa Piedra is in blue shale and shells at 1,940 feet.

Shipments Decline

That August petroleum shipments from Mexican ports will show a sharp decline from the July movement is indicated. The movement will probably be at least a half million barrels less than July, which, with a movement of 8,247,410 bbls. was the lowest in a number of years.

A party of seven Russian oil field men from the Baku fields have spent the past week here looking over the practical side of exploration and exploitation endeavors in Mexican fields. They are being conducted by G. S. Ippa, Pittsburgh Oil Well Supply Co., and J. M. Zilborg, of the Westinghouse International Electric Co. From here the party leaves for California fields. In it were: Sergey Shahotin, field foreman; Ivan Tarousov, toolie; Peter Kopliagen, field shop foreman; Alex Malanshec, field foreman; Titkhon Galkinmach, shop foreman; Ovan Dodonkin, tool room foreman; Hey. Eibator, field superintendent.

Henry F. Fabian, a prominent Belgium banker, who was identified with the Belgian debt commission to the United States, and who has interests in many parts of the world, is here, as a vice president of the Ita Mex Oil Co., (Italian capital), inspecting its holdings with Ing. G. B. Fissore, resident manager of the company. The Ita Mex has production in the Panuco Field, and also owns a sea loading terminal at Tampico.

KANSAS FIELDS

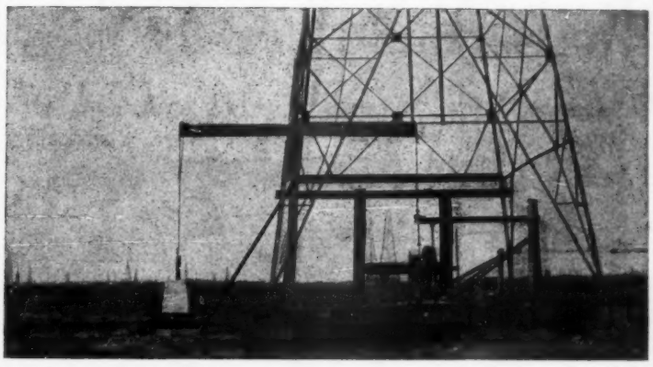
(Continued from Page 40)

was shot with 40 quarts and is being cleaned out.

Hayes Robertson has spudded No. 7, SW cor. NE Section 25-23-8. Phillips Petroleum Co. and Conway's' No. 1, NE cor. SE SE Section 3-23-9, had the sand 2,390-2,400 feet with a total depth of 2,414 feet. The well was shot with 140 quarts and is standing with 1,500 feet of oil in the hole. It is being cleaned out. Greenland Oil Co. and others are drilling at 1,110 feet in No. 15, NE cor. NE SE Section 10-23-9. Greenland Oil Co. has completed No. 12, SE cor. SW SE Section 10-23-9. Sand was 2,325-93 feet and the well is making lots of water. It was plugged back to 2,389 feet and shot with 15 quarts, and is making 15 bbls. Phillips Petroleum Co. has a rig up for No. 3, SE cor. NW SW Section 19-23-9; and also for No. 1, SE cor. NW Section 20-23-9; and the rig is on the ground for No. 3, SW cor. NE Section 20-23-9; the rig is up for No. 3, NW cor. SE Section 20-23-9.

The Minnehoma Oil Co. is building the rig for No. 7, NE cor. NE Section 21-23-9. Selby Oil & Gas Co. has completed a 200-bbl. well in No. 3, NE cor. SW SE Section 35-22-9. Sand was topped at 2,431 feet with the pay 2,439-77 feet. The well was shot with 30 quarts. Selby Oil & Gas Co. has the rig

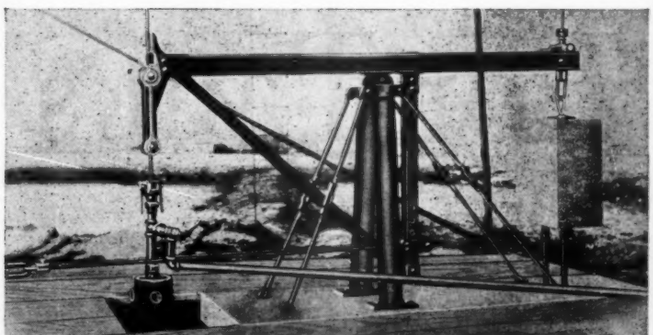
Deep Well Pumping Jacks



The above illustration is the method used of counterbalancing the Oklahoma Jack. It is the best of its kind used but it is expensive to install and dangerous to operate. It is too high and the weight is too far away from the load. Hard to unlimber for pulling rods.

Durnell Counterbalanced Pumping Beam

Illustrated below overcomes all these objections.



DURNELL COUNTERBALANCED PUMPING BEAM
(Patent Applied for)

Is a counterbalanced beam made of heavy steel channels with the polish rod on one end and the weight on the other, and is operated direct from the pull rods.

The Durnell Counterbalanced Pumping Beam is a great success. One company has over 150 of them and say that it is the only type of jack that has not broken its pull rod line.

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up for No. 5, SE cor. NE SE Section 35-22-9, and has completed No. 2, SW cor. SE Section 35-22-9. Sand was 2,394-2,406 feet and the well made 185 bbls. after a shot of 40 quarts. Mid-Kansas Oil Co. has rigged up No. 1, NW cor. SW SW Section 35-22-9. Waite Phillips Co. is rigged up and shut down in No. 1, SW cor. NE SW Section 36-22-9.

Sinclair Oil & Gas Co. has completed a good well in No. 22, NE cor. SW SE Section 19-22-10. Sand was 2,297-2,356 feet and the well was shot with 10 and with 20 quarts. It made 250 bbls. after the second shot. Sinclair Oil & Gas Co.'s No. 19, NE cor. NW SW Section 20-22-10, had the top of the sand 2,255-2,329 feet and had 1,600 feet of oil in the hole. It was given a shot of 120 quarts after which it made 400 bbls. when the casing collapsed. It is not completed.

Titus & Norris have a light well in No. 10, SE cor. SW NE Section 30-22-10. Broken sand was 2,562-2,638 feet and the well is making 20 bbls. naturally. Sheedy and others' No. 5, NW cor. SW NW Section 11-23-9, had sand 2,300-46 feet and was shot with 100 quarts. It made 100 bbls. after the shot. Roth, Faurot and the Mission Oil Co.'s No. 56, SE cor. NE SW Section 28-23-10, is drilling at 450 feet. Davis, Hazlett, and others have the rig and tools in for No. 7, SE cor. NW SW Section 7-22-11. Mid-Continent Petroleum Corp. is building the rig for No. 4, NW cor. SW SW Section 18-22-11. T. K. Simmons is drilling at 1,100 feet in No. 1-A, NE cor. NW Section 19-22-11. York State Oil Co.'s No. 2-D, SW cor. SE SW Section 29-22-11, had sand 1,942-88 feet and the hole filled 600 feet with oil. The well swabbed 145 bbls. oil and 140 bbls. of water. It is not completed.

Other Operations

Polhamus and others have completed another well in No. 13, CSL SE SW Section 34-24-9. Broken sand was 2,150-2,250 feet and the hole had 400 feet of oil natural. It was shot with 200 quarts and made 75 bbls. Arkansas Fuel Co. has completed No. 12, CSL NE SW Section 1-24-9. The sand was found 2,280-2,315 feet and the well is good for 75 bbls. after a shot of 100 quarts. Arkansas Fuel Co.'s No. 13, C NE SW Section 1-24-9, is drilling at 800 feet. Roth, Faurot and the Mission Oil Co. are drilling at 450 feet in No. 11, CSL NE NE NE Section 1-24-9.

The Skelly Oil Co. has completed No. 8, SE cor. NE SW Section 15-23-9. The well is good for 150 bbls. after a shot of 100 quarts in sand 2,328-59 feet. Empire Gas & Fuel Co.'s No. 27, SW cor. NE Section 16-23-9, had the sand 2,485-2,528 feet with a total depth of 2,531 feet. It made 493 bbls. the first day after a shot of 140 quarts. Phillips Petroleum Co.'s No. 3, SE cor. SW SW Section 12-22-10,had the sand 2,172-96 feet with the first oil at 2,175 feet. The well was shot with 60 quarts and made 200 bbls. the first day after the shot. Rhodes and Abel have a dry hole in No. 2, CSL SW SE NW Section 33-22-1. Total depth at which the hole is abandoned is 2,440 feet. Mid-Kansas Oil Co.'s No. 24, SE cor. NW SE Section 23-23-10, is completed for a 175-bbl. well after a shot of 100 quarts in broken sand 2,024-2,112 feet. Mid-Kansas Oil Co.'s No. 29-A, NW cor. SE NE Section 31-23-10, is fishing for tools at 1,240 feet.

Noble Oil & Gas Co. has rigged up a machine for No. 2, SE cor. SW Section 1-22-11. Tidal Oil Co. has completed a well in this region in No. 4, SE cor. NE NE Section 11-22-11. The sand was found 1,769-1,821 feet and the well is good for 40 bbls. after a shot of 160 quarts. Empire Gas & Fuel Co.'s No. 5, SW cor. NW NE Section 14-22-11, had the sand 1,853-1,917 feet and was given a shot of 195 quarts. It is being cleaned out.

Empire Gas & Fuel Co.'s No. 1, SW cor. SE Section 19-22-11, is drilling at 650 feet. Phillips Petroleum Co. has spudded No. 2, SW cor. SE NE Section 29-22-11; and No. 1, NW cor. NE Section 30-22-11, is drilling at 1,140 feet. York State Oil Co.'s No. 13-C, NW cor. NW Section 32-22-11, is drilling at 1,450 feet. White Eagle Oil Co. has a rig up for No. 1, SW cor. NW Section 9-23-11.

On the east edge of the county, R. G. Gillespie has completed No. 2, NE cor. NW Section 27-22-13, where the sand was found 1,882-94 feet and the well was shot with 300 quarts and is making 6 bbls. of oil and 5 bbls. of water.

Mid-Kansas Oil Co.'s No. 4, SW cor. NW NW Section 20-25-9, had sand 2,395-2,415 feet and the well is making 150 bbls. after a shot of 40 quarts. J. B. Murphy has completed No. 1, CSL SW SW NW Section 29-24-11. Sand was 1,567-87 feet and the well was shot with 40 quarts. It is good for 15 bbls. C. & C. Leasing Co.'s No. 2, CEL SE SE SE Section 36-25-12, had the top of the lime 1,630 feet and sand 1,638-41 feet with a total depth of 1,647 feet. It was plugged back to 1,641 feet and is completed for 2,000,000 feet of gas. Christy and others are drilling at 300 feet in No. 2, SW cor. SE SE Section 31-24-13.

Mission Oil Co. and others' No. 1, SE cor. NW Section 25-23-9, had sand 2,506-35 feet with the first oil at 2,517 feet. The well was shot with 40 quarts and made 550 bbls. the first day after the shot. Hayes, Robertson and others' No. 4, CEL SE NE Section 25-23-8, is completed for 180 bbls. after a shot of 80 quarts in sand 2,535-60 feet. Phillips Petroleum Co. has spudded No. 1, SE cor. NW Section 20-23-9. National Refining Co. has a rig up for No. 2 CEL NE NW SW Section 3-25-9.

Cowley County

Arkansas Fuel Co. has a rig up for No. 1, SW cor. SW Section 20-30-4. A. L. Irish has a rig on the ground for No. 2, SW cor. NW NE Section 28-31-4. Mississippi Valley Oil Co. has spudded No. 1, SW cor. NE Section 28-32-4. In the Graham Pool, the Marland Oil Co. has abandoned the location for No. 1, SE cor. SW NE Section 9-33-3. Marland Oil Co.'s No. 3-A, SE cor. NE Section 9-33-3, had sand 2,555-72 feet. It swabbed 15 bbls. of fluid, half water the first 24 hours. It is not completed.

In the Rainbow Bend Pool, the Waite Phillips Co.-Independent Oil & Gas Co.-Marland Oil Co. have the following operations: Number 4, SE cor. SE Section 17-33-3, is drilling at 645 feet; No. 5, SW cor. NE NE Section 20-33-3, had sand 3,197-3,228 feet, with a total depth of 3,230 feet. It is making 5,000,000 feet of gas and 350 bbls. of oil. The rig is up for No. 13, NE cor. SW NW Section 21-33-3. Number 4, NE cor. SW SW Section 21-33-3, had sand 3,238-77 feet, total depth 3,278 feet. The well made 3,000,000 feet of gas and 650 bbls. of oil.

In the old Winfield Pool, the J. A. Hull Co. has a dry hole in No. 1, SE cor. NE NE Section 23-32-4. The depth at which it is abandoned is 3,017 feet. The rig has been abandoned for No. 2, NE cor. NE Section 23-32-4. The rig is up for No. 13, SE cor. NE Section 24-32-4. The rig is also up for No. 11, NE cor. SE Section 24-32-4. Number 9, SE cor. NE SW Section 24-32-4, is drilling at 525 feet. No. 1, SW cor. NW Section 19-32-5, had sand 2,980-3,059 feet. The well made 3,000,000 feet of gas and sprayed 10 bbls. of oil an hour for the first 3 hours. It was shot with 10 quarts and flowed 153 bbls. the first 18 hours. It was shot again with 20 quarts and made 185 bbls. the next 24 hours. It will be shot again.

Lewis Oil Co.'s No. 6, CSL NW Section 31-30-6, had sand 2,888-95 feet and is flowing 125 bbls. a day while it is being agitated. Phillips Petroleum Co.'s No. 1, CSL Lot 7, Section 6-33-8, is abandoned at 900 feet and the rig will be skidded.

Butler County

John Rogers has a rig up for No. 1-A, SW cor. Lot 25 in Section 6-27-8. Sheldon and others have a rig up for No. 1, NE cor. NE Section 13-24-7. Dewey, Byers and others have built the rig for No. 1, NW cor. NE SW Section 25-24-7. The rig is up for Ballierre and others' No. 1, NE cor. SW Section 1-28-7.

Rice County

Youker and others are fishing for 6-

inch casing at 3,030 feet in No. 1, NE cor. NW Section 2-21-6w.

Phillips County

Curtis & Frost are drilling at 800 feet in No. 1, NW cor. SE Section 15-5-16w.

Mitchell County

H. F. Wilcox Oil & Gas Co. has a dry hole at 3,625 feet in No. 1, NW cor. NE Section 23-6-9w.

Russell County

Derby Oil Co. is drilling at 1,000 feet in No. 1, SE cor. SW SW Section 32-11-15w. Midwest Refining Co. has completed another well in the Russell territory. It is No. 1, NE cor. NW Section 32-11-15w, and had the sand 2,915-25 feet, and water at 2,929 feet. The well was plugged back to 2,925 feet and it is making 25 bbls. a day.

The Carter Oil Co. has spudded No. 1, SW cor. NE Section 5-12-15w. Derby Oil Co.'s No. 4, SE cor. NE SW Section 5-12-15w, had sand 2,778-85 feet and swabbed 285 bbls. in 12 hours. It was drilled into water at 2,895 and plugged back to 2,829 feet and shot. It is good for 75 bbls. Derby Oil Co.'s No. 8, NW cor. SW Section 5-12-15w, is spudded.

Tom Johnson is drilling at 600 feet in No. 2, NW cor. SW SE Section 5-12-15w; and the rig is up for No. 3, SE cor. SW SE Section 5-12-15w Muddy Oil Co. has the rig up for No. 3, NE cor. SW NW Section 5-12-15w. Streeter, Stearns & Yankee have the rig up for No. 1, NW cor. SW SE Section 5-12 15w. Valerius Oil & as Co.'s No. 4, SW cor. SW Section 5-12-15w, is drilling at 2,080 feet.

Ellis County

J. A. Harvey has a dry hole in No. 1, SE cor. NW NE Section 18-13-17w. It is abandoned at 3,785 feet.

Marion County

The Mississippi Valley Oil Co. is drilling at 500 feet in No. 1-A, SW cor. NW Section 15-20-5. This is a twin well. The National Oil & Refining Co.'s No. 2, C S half NE Section 17-21-1, had the chat 2,437-39 feet and made 300 bbls. on the swab. It is not completed.

Coffey County

Terrier & Ballierre have spudded in No. 1, C NE NE Section 11-20-13.

Harvey County

Phillips Petroleum Co. has a dry hole in No. 1, SW cor. SW Section 13-23-2. It is abandoned at a total depth of 2,770 feet.

Elk County

Anderson Brothers' No. 4, CSL SE NE Section 21-29-9, had the sand 1,403-1,505 feet with 3,000,000 feet of gas. It is shut in and completed. Empire Gas & Fuel Co. has the rig up for No. 4, SW cor. NE NW Section 13-29-9.

E. C. Roth & Co. have completed No. 11, NW cor. SE SW Section 12-29-8. The well is making 90 bbls. after a shot of 80 quarts in sand 2,002-33 feet. Anderson Brothers' No. 3, C NE SE Section 21-29-9, had sand 1,481-1,504 feet and is completed with 6,500,000 feet of gas.

Chautauqua County

R. M. Gales and others are drilling at 350 feet in No. 1, SW cor. SW Section 36-32-8. Orlando Petroleum Co. is rigging up No. 1, C SW Section 16-33-9. Renfrow and others are drilling at 750 feet in No. 1, SE cor. NW Section 24-33-9.

Sumner County

The H. F. Wilcox Oil & Gas Co. has a failure in its wildcat venture No. 1, NW cor. SW Section 5-32-2w. This interesting well is declared dry and abandoned at 4,225 feet.

Kingman County

Port Fleeger is drilling at 400 feet in No. 1, NE cor. SE Section 16-27-1w.

Lyon County

Near Emporia, Johnson & Moreland have a dry hole in No. 1, SE cor. SW Section 4-19-12. The well is abandoned at 2,160 feet.

Swartz and others have completed No. 2, NE cor. SE NE Section 32-21-12. Sand was 1,860-91 feet and the well made 30 bbls. after a shot of 80 quarts.

OKLAHOMA FIELDS

(Continued from Page 40)

the pipe is being cemented above the sand.

Near Holdenville the Independent Oil & Gas Co. has spudded No. 1 SW cor. NE Section 13-7-9.

Papoose Pool

Phillips Petroleum Co. has a rig up for No. 8 NE cor. SE SE Section 3-9-9. T. B. Slick has a disappointment in No. 5 NW cor. NE SW Section 3-9-9. Sand was 3,283-90 feet with the pay 3,290-3,312 feet. It was plugged back to 3,300 feet and is estimated at 10 bbls. a day. A hole full of water was found at 3,312 feet.

Pontotoc County

Lasalle and others have a rig up for No. 1 NE cor. SW Section 28-5-5. Bowles & Smith have built the rig for No. 1 NW cor. SE Section 34-5-6. The Texas & Pacific Coal & Oil Co. has a rig up for No. 3 CSL NW Section 34-5-6.

Garvin County

The Texas & Pacific Coal & Oil Co. has moved in a standard rig for No. 1 NE cor. SW Section 34-3-2. The Texas Co.'s No. 8 NW cor. SW NE Section 17-1-3w, had sand 1,703-26 feet and is swabbing 150 bbls. of oil. It is not completed. Wallace Murphy's No. 1 SE cor. SW NW Section 18-1-3w, is dry and abandoned at 2,720 feet.

Coal County

J. A. Bearman has spudded and shut down No. 1 SE cor. SE Section 18-2-9.

Muskogee County

Harsher and others have spudded No. 3 C NE SW Section 1-14-16.

Lincoln County

In the Davenport Field, Flynn & Morgan are drilling at 415 feet in No. 1 NE cor. NW SW Section 25-15-5. Magnolia Petroleum Co.'s No. 5 Sukavoty, NW cor. SW Section 2-14-5 had the sand 3,299-3,377 feet and made 610 bbls. the first day. Magnolia Petroleum Co. has the rig up for No. 7 SW cor. NE SW Section 2-14-5. The Texas Co. is rigging up No. 6 NW cor. SE SW Section 2-14-5. Magnolia Petroleum Co. has a rig on the ground for No. 7 NW cor. NE NE Section 3-14-5 and the rig is also on the ground for No. 8 SW cor. NE NE Section 3-14-5. Prairie Oil & Gas Co.'s No. 10 SE cor. NW Section 3-14-5 is drilling at 480 feet. Prairie Oil & Gas Co. has the rig up for No. 11 NE cor. SW NW Section 3-14-5; and the rig is on the ground for No. 12 SW cor. SE NW Section 3-14-5. Southwestern Petroleum Co. and Selby Oil Co. have a rig for No. 8 SW cor. NE SE Section 3-14-5.

M. V. Shriver is spudding No. 2 NW cor. SW Section 7-14-4. The Pure Oil Co. is drilling at 700 feet in No. 2 CNL NW NW SW Section 12-14-4.

Kay County

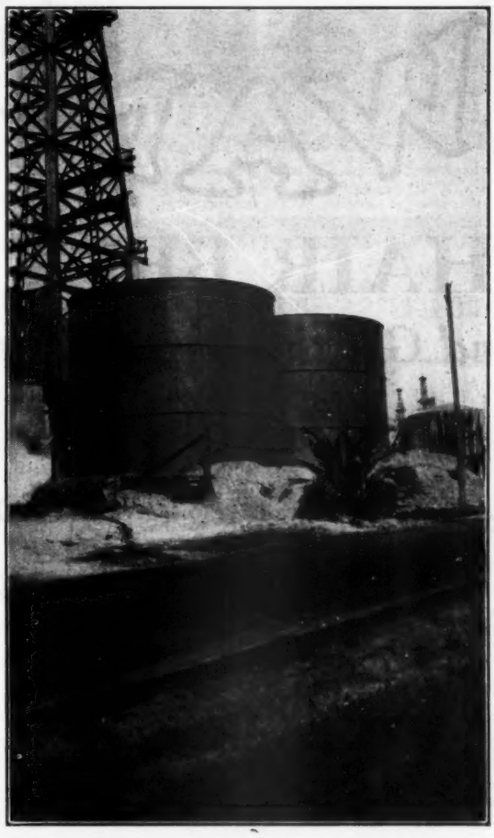
In the North Braman Pool, the Wentz Oil Corp. has completed a small gas well in No. 1 SW cor. SW Section 16-29-1. The gas sand was found 2,034-36 feet and the well is shut in and completed with 2,500,000 feet of gas.

In the Newkirk area, A. D. Morton and others are rigging up No. 1 C NE Section 21-28-1. The Carter Oil Co. has spudded No. 3 NE cor. SE SE Section 9-27-1w. Harris & Haun have spudded No. 2 C NE SW Section 9-27-1w.

In the Hubbard Pool, the Marland Oil Co.'s No. 4 SE cor. NE SW Section 1-26-2w, had oil 2,950-75 feet and is swabbing 200 bbls. Prairie Oil & Gas Co.'s No. 7-A CSL SW SW SE Section 1-26-2w, is spudded.

In the Thomas Pool, the Prairie Oil & Gas Co. is building the rig for No. 1 SE cor. NE SE Section 20-25-2w.

In the Tonkawa Pool, the Wents Oil Corp. has completed No. 2 SE cor. SE Section 28-25-1w, which had the Wilcox sand 4-222-65 feet and produced 1,860 bbls. of oil the first day. No. 3 NE cor. SE SE Section 28-25-1w, had the sand 4,215-60 feet with an initial production of 2,685 bbls. No. 4, SE cor. NE SE Section 28-25-1w, made 1,180 bbls. the first day from sand 4,220-65 feet. The Carter Oil Co. is rigging up No. 1 NE cor. SW Section 30-25-1w. Comar



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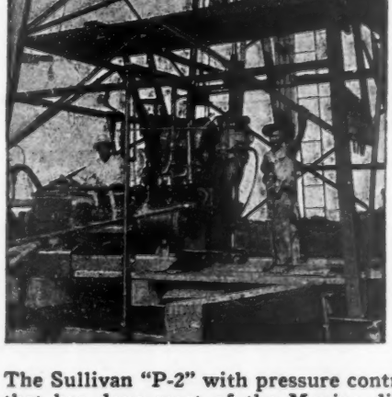

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Oil Co.'s No. 10-W, SW cor. NW NW Section 34-25-1w, had the sand 4,272-84 feet with no production after a shot of 15 quarts.

Osage County

East of the Burbank Field, the Phillips Petroleum Co. has a dry hole in No. 3 NW cor. NW NW Section 17-29-6. It is abandoned at a total depth of 2,950 feet. Phillips Petroleum Co. has spudded another well in Burbank. It is No. 8, NE cor. SE SE Section 2-27-5. Skelly Oil Co. is drilling at 250 feet in No. 4 CSL SW SE SE Section 2-27-5. Prairie Oil & Gas Co. has completed No. 5 NE cor. NW SE Section 12-27-5. The sand was found 2,956-3,018 feet and the well made 160 bbls. naturally. It made 205 bbls. the first 24 hours after a shot of 10 quarts. Prairie's No. 16 NW cor. SE SE Section 12-27-5 was shot into a 350-bbl. well after it had made 200 bbls. naturally from sand 2,934-3,005 feet. It was shot with 25 quarts. Mid-Kansas Oil Co.'s No. 9 SW cor. SE NW Section 26-27-5 is drilling at 300 feet. Prairie Oil & Gas Co. has a rig on the ground for No. 1 SW cor. SW Section 8-27-6. Phillips Petroleum Co. has completed a big well in No. 16 NE cor. NE Section 18-27-6. The sand was found 2,915-3,000 feet and the well made 700 bbls. after a shot of 140 quarts. The Carter Oil Co. has completed No. 6 CEL NE SE NE Section 20-26-6. The well was shot with 115 quarts and made 500 bbls. from sand 2,920-82 feet. Lewis Oil Co.'s No. 9 SW cor. NE Section 21-26-6 had the sand 2,920-75 feet and made 700 bbls. after being shot with 140 quarts. Lewis Oil Co. has the rig up for No. 12 CEL NE NE NE Section 21-26-6. The Carter Oil Co.'s No. 13 SE cor. NW Section 21-26-6 had the sand 2,940-93 feet with a hole full of oil. It will be shot. Carter Oil Co.'s No. 14 CSL SW SE NW Section 21-26-6 had the sand 2,940-97 feet and made 350 bbls. the first 15 hours after a shot of 120 quarts.

The Texas Co. will drill an old well deeper in No. 2 NW cor. NE SE Section 29-25-8. Its old total depth was 2,474 feet. The Texas Co. has completed No. 3 NW cor. SE Section 29-25-8. Sand was 2,468-86 feet, and the well was plugged back to 2,482 feet, where it is making 20 bbls. a day naturally. Seamons and others' No. 1 SE cor. NW Section 32-24-8 had the top of the Burgess sand 2,456-75 feet with 1,500 feet of oil in the hole. It is an old well drilled deeper. Winona Oil Co. has completed No. 15 C SE Section 28-24-10. The Cleveland sand was found 1,375-92 feet and the well is making 15 bbls. after a shot of 80 quarts. The Devonian Oil Co. has completed No. 11 C SE SW Section 34-25-11. Sand was 1,667-1,722 feet with a total depth of 1,728 feet. The well was shot with 120 quarts and made 80 bbls. on the swab the first day and 50 bbls. on the swab the second day.

Several Dry and Abandoned

Barnsdall Oil Co. has a dry hole in No. 5 C SW SW Section 2-24-11, which is abandoned at 1,930 feet. Titus and others' No. 8 CWL NE Section 12-24-11 had the sand 1,725-67 feet and made 10 bbls. after a shot of 160 quarts. Mid-Kansas Oil Co.'s No. 1 SW cor. SW Section 7-24-12 is dry and abandoned at 2,134 feet. Owen-Osage Co. has completed No. 336 NE cor. NE Section 32-24-12. The sand was found 1,815-16 feet ad the well is shut in with 7,000,000 feet of gas. Owen-Osage Co.'s No. 339 SE cor. SW Section 34-24-12 is dry and abandoned at 1,847 feet. Owen-Osage Co.'s No. 342 CNL NE NW Section 32-24-12 is a machine. American Oil & Development Co.'s No. 20 CSL SW NE Section 13-23-10 is drilling at 230 feet. Delmar Oil Co.'s No. 1 NW cor. NE Section 20-23-10 had 1,000,000 feet of gas in a shallow sand found 410-25 feet. It is drilling at 485 feet. Sinclair Oil & Gas Co.'s No. 23 NE cor. SE SE Section 32-22-10 had 250,000 feet of gas in the bottom of the Oswego lime at 1,435 feet and is drilling at 1,640 feet. Owen-Osage Co. has a machine in for No. 343 CSL SE SE NW Section 7-23-11. Its No. 337 CWL NW SE Section 7-23-11 had sand 1,357-61 feet with 1,500,000 feet of gas. Oklahoma Natural Gas Co. has a failure in No. 239 SE cor. NW Section 11-21-10, which is dry and abandoned at 1,865 feet. Devonian Oil Co. has completed No. 2 NE cor. NW Section 14-21-10. Sand was 1,919-29 feet and the well is shut in with 3,500,000 feet of gas. Titus and others are drilling at 400 feet in No. 3 SW cor. SW Section 15-21-12.

Indian Territory Illuminating Oil Co. has a machine in for No. 334 CWL NW NE SE Section 29-29-10. Wiser Oil Co.'s No. 14 CWL NW SE NW Section 27-29-11 is on top of the Peru sand at 912 feet. Edith Oil Co.'s No. 10 C N half SE SW Section 27-29-11 is drilling at 200 feet. Wah-Shah-She Oil Co. has abandoned the location for No. 10 CNL NW NE Section 33-28-11. The Texas Co.'s No. 1-A CNL NE SE Section 21-26-8 had sand 963-80 feet with 6,000,000 feet of gas. It is not completed. Presburg, Merril and others have a dry hole in No. 4 C NW NW Section 17-27-10, which is abandoned at 1,303 feet. Devonian Oil Co. and Marland Oil Co.'s No. 1 SE cor. SE NE Section 10-21-10 had 5,000,000 feet of gas in the top of the lime at 2,064 feet and is not completed.

Creek County

A. D. Whitten and others are drilling at 410 feet in No. 1 SE cor. NW Section 5-19-8. J. B. Grieves' No. 4 CSL SW NE NW Section 13-9-8 had sand 2,395-2,418 feet and is pumping 12 bbls. It is not completed and may be drilled deeper. Lassen Brothers' No. 2 NW cor. SW NW Section 13-19-8 had sand 2,360-75 feet with 10,000,000 feet of gas and it is being drilled ahead. Shaffer Oil & Refining Co.'s No. 2 NW cor. SW Section 13-19-8 had sand 2,892-94 feet and is good for 50 bbls. naturally. H. U. Bartlett has completed No. 5 NW cor. NE SW Section 17-18-9. The well is making 15 bbls. after a shot of 10 quarts in sand 2,925-53 feet.

Atlantic Oil Producing Co.'s No. 3 CSL SW SE Section 14-17-8 an old well drilled deeper, went through the Bartlesville sand 2,713-26 feet and will test out the Dutcher sand. Transcontinental Oil Co.'s No. 1 SW cor. SW Section 19-17-8 is drilling at 320 feet. Waite Phillips Co.'s No. 1 NE cor. SE NE Section 24-17-8 an old well, is being rigged up to drill deeper. Waite Phillips Co., Stoner and others are rigging up to drill an old well deeper in No. 1 SE cor NE SE Section 27-17-8.

In the territory that was opened by Frank Billingslea and the Atlantic Oil Producing Co., there are several new rigs as a result of the recent find. Atlantic Oil Producing Co. and Phillips Petroleum Co. have a rig on the ground for No. 2 NW cor. SE NW Section 3-15-7. Skelly Oil Co. has spudded No. 7 SW cor. NW SW Section 12-14-8. Texas & Pacific Coal & Oil Co. has spudded No. 1 SW cor. NE Section 12-14-8.

Payne County

The Amerada Petroleum Corp. has abandoned No. 1 SE cor. SE Section 15-18-3 at a depth of 1,121 feet. The Deep Rock Oil Co. is moving in the rig and tools for No. 1 C SW SE Section 23-18-3.

Josey Oil Co. has completed another well in the pool opened by it some time ago. The new well is No. 7 SW cor. SE SE Section 36-19-5 and the sand record was 3,360-3,401 feet. The well had been producing 180 bbls. a day and was shot with 7 quarts and jumped back to 245 bbls. a day. Josey Oil Co.'s No. 8 C SE Section 35-19-5 had sand 1,201-29 feet and is completed for 13,000,000 feet of gas; and No. 1 NW cor. SW Section 1-18-5 had sand 3,472-73 feet and 3,475-78 feet with a total depth of 3,631 feet. The well is making 2 bbls. a day on the pump. The Home Gas Co.'s No. 1 CSL NE NW NW Section 2-18-5 had the Wilcox sand 3,383-87 feet and is showing for 5 bbls. a day. Shaffer Oil & Refining Co.'s No. 12 SE cor. NE NE Section 2-18-5 had the sand 34,496-3,503 feet and the well made 85 bbls. naturally. It was given a small shot and made 140 bbls. a day. No. 14 on the same lease in NW cor. NE NE Section 2-18-5 had the sand

3,378-3,417 feet and the well is making 200 bbls. after a shot of 5 quarts.

Pawnee County

Schoenfeld and others have completed a small well in No. 1, SW cor. NE Section 9-20-9. Sand was 2,372-85 feet and the well was shot with 20 and with 60 quarts and is good for 20 bbls. a day.

Minnehoma Oil Co.'s No. 4, SW cor. SW Section 13-21-7, had the sand 2,728-37 feet and is making 20 bbls. of oil and 20 bbls. of water. It is completed. R. E. Freeman's No. 2, CSL SW NE NW Section 17-21-7, had sand 2,620-35 feet and has 1,800 feet of oil in the hole. It is not completed and will probably be shot. Indian Territory Illuminating Oil Co.'s No. 6, NW cor. NE NW Section 1-21-8, had sand 1,205-14 feet with a show for a 100-bbl. well. It may be drilled deeper. Adamson and others' No. 1, NE cor. SE SE Section 31-21-8, is spudded. Their No. 1, SE cor. SW SW Section 32-21-8, an old well drilled deeper, had the top of the Wilcox sand 2,822 and lost the tools. The well flowed 18 bbls. an hour over night and is now rated at 175 bbls. a day. It is not completed.

Turner and others' No. 1, SW cor. NE Section 8-20-7, had sand 2,694-2,713 feet and was shot with 20 quarts. It made two small flows after the shot and the tubing is being run. It is estimated at 10 bbls. a day. The sand began to whiten up the last couple of feet. C. H. Burton is drilling at 970 feet in No. 1, NE cor. NW Section 35-20-7. Adamson and others have abandoned No. 1-A, NE cor. NW NW Section 5-20-8, at 2,720 feet. J. V. Shelst and others' No. 1-A, NW cor. NE Section 7-20-8, had sand 2,396-2,404 feet and the well is estimated at 50 bbls. It is not completed. McCullough & McMahon have a dry hole in No. 1, CNL SW SW Section 24-20-8. It is abandoned at 2,826 feet. C. L. McMahon's No. 5, NW cor. SW Section 24-20-8, had sand 2,796-2,809 feet and was shot twice with 10 quarts. It is showing for a 100-bbl. well and is not completed.

Grady County

Briscoe & Hall are drilling at 325 feet in No. 2, C NE SE Section 25-5-8w, and No. 2, CNL NW NW Section 25-5-8w, is drilling at 450 feet. Magnolia Petroleum Co. has a dry hole in No. 1, C SW SE Section 25-5-8w, which is abandoned at 3,535 feet. Carter Oil Co.'s No. 1, NW cor. SE NE Section 34-5-8w. Kipp and others have the rig up for No. 2, C SE NW Section 35-5-8w. J. B. Nichols is drilling at 103 feet in No. 1, CSL SE SW SE Section 35-5-8w. Briscoe & Hall have completed a 50-bbl. pumper in No. 4-A, NW cor. NE NE Section 6-5-9w. Broken sand was found 2,095-2,378 feet. Emerald Oil Co. has set the 12-inch casing at 120 feet in No. 1, CEL SE SE Section 26-4-8w.

Kiowa County

Alcorn Oil Co. has a failure in its wildcat well No. 1, SE cor. SW Section 13-7-10w. Total depth of the duster is 3,222 feet.

Beckham County

W. R. Duke has completed a gas well that is shut in with 2,000,000 feet of gas in No. 1, NW cor. SW Section 30-8-21w. Sand was 1,020-52 feet.

Stephens County

In the Duncan territory, Max Westheimer has timbers on ground for No. 1 NE cor. NW SE Section 20-2-9w. Amerada Petroleum Corp.'s No. 2, SW cor. NW NW Section 25-1-9w, is completed. Sand was 2,295-2,304 feet and the well is estimated at 17 bbls. on the pump. Eagle Creek Oil Co.'s No. 1, NE cor. SE NE Section 26-1-9w, had sand 2,280-90 feet and the well is making 70 bbls. naturally. Ka Wye Drilling Co.'s No. 2, C SW SE Section 26-1-9w, is dry and abandoned at 2,278 feet. Law Kenzie has the rig up for No. 1-A, CNL NW SW Section 21-1-8w. Brewer, Stacy and others have the rig in for No. 1, NW cor. SW NE Section 27-2-10w.

Magnolia Petroleum Co.'s No. 10, CSL NE NW SE Section 17-2s-7w, is drilling at 800 feet. Gant and others' No. 1, CNL NE NE Section 36-1s-9w, had sand 1,996-99 feet and has 200 feet of oil in the hole. It is being bailed and swabbed and is not completed. Fisher Brothers are rigging up a rotary for No. 1, CSL NE SW NE Section 22-1s-8w. Lorraine Petroleum Co. is rigging up a rotary for No. 2-A, CSL SE SW Section 32-1s-8w, and No. 3, CSL NE SE SW Section 32-1s-8w, is drilling at 600 feet; No. 5, CSL SW SW SE Section 32-1s-8w, had sand 2,205-14 feet, and is estimated at 75 bbls.

Western Oil Corp. is rigging up a rotary for No. 1, NE cor. SE SW Section 32-1s-8w. Carter Oil Co.'s No. 2, CNL NE NE NW Section 5-2s-8w, had sand 2,251-57 feet and is making 70 bbls. naturally. Empire Gas & Fuel Co. is rigging up a rotary for No. 5, NE cor. NW NE Section 5-2s-8w; and is moving in a rotary for No. 7, CNL NW NE Section 5-2s-8w, an old well to be drilled deeper. Pace, Muse, Jones and others have a rotary rig in for No. 1, SW cor. NE SW Section 12-2s-8w. Wicks & Coats have a rotary rig in for No. 1, NW cor. NW Section 13-2s-8w.

Carter County

In the Brock Field, the Amerada Petroleum Corp. has the following operations: Number 1-A, CSL NW SE SE Section 20-5s-1, is drilling at 910 feet; No. 2, CNL SE SE Section 28-5s-1e, is dry and abandoned at 1,383 feet; No. 9, CSL NE NW SE Section 28-5s-1, is drilling at 925 feet; No. 4, CSL NE SE SW Section 34-5s-1, is dry and abandoned at 1,098 feet.

In the Graham-Fox area, the Humble Oil & Refining Co.'s No. 5, SW cor. NW NE Section 22-2s-3w, had broken sands 2,598-2,613 feet with a total depth of 2,616 feet in shale. The 6-inch casing is being run and the well is estimated at 20 bbls. a day. It is not completed. Magnolia Petroleum Co. has the rig up for No. 5, SW cor. NE Section 23-2s-3w. Cameron Refining Co. has completed No. 4, C NE SW Section 24-2s-3w, which had broken sands 2,364-2,562 feet and is pumping 50 bbls.

Atlantic Oil Producing Co. is building a rotary rig for No. 3, CSL NE NE SW Section 25-2s-3w. Coline Oil Co.'s No. 1, SW cor. NE Section 7-2s-2w, had broken sands 1,812-34 feet and the well swabbed 110 bbls. a day. It is being put on the pump. The Carter Oil Co. is building a rotary rig for No. 1, NW cor. SW SW Section 8-2s-2w. Franklin Carter's No. 3-A, SW cor. NW NW Section 30-2s-2w, had broken sands 2,193-2,822 feet. It is flowing 165 bbls. through tubing and a packer.

GULF COAST

(Continued from Page 50)

Loughridge is drilling below 2,700 feet. These locations were made by Richard B. Thacker, of Houston, who remains at the tests to check the formations.

The Roxana Petroleum Corp. has finished the work of making geophysical explorations in the Johnson Bayou section of Cameron Parish and removed the torsional balance apparatus and crew to Lake Charles. The results of the testing is unknown.

In St. Martin Parsh, the Ohio Oil Co. has started No. 1 Martin and is drilling No. 1 Haver Dome n Calcasieu Parish. The Pure Oil Co. is drilling No. 2 Sweet Lake in the southern part of Calcasieu. Poole and others has started a test in Section 36. The Rycade Petroleum Corp.'s No. 1 Hooks, Lake Arthur, is reaming around 1,900 feet. The Vacuum-Gulf has spudded in No. 1 Prien Lake. The Union Sulphur Co. has started No. 1 Holliex, Calcasieu Parish.

In Jeff Davis Parish, the Yount-Lee Oil Co. has started No. 3 Welsh Land & Development Co.'s holdings. Same company is drilling No. 6 at Hackberry Island.

Rockdale-Minerva Field

In the shallow sand section of Milam County (Texas) the Texas Petroleum Co. is drilling No. 9 Phillips. The Milam Production Co.'s No. 2 Gaither is drilling, as is the Chicago Oil & Land Co.'s No. 2 Gaither, the Anchor Oil Co.'s No. 3 Hamilton and the Rockdale-Bryan Oil Co.'s No. 1 Coulter.

The W. G. Wells Co., Inc., plans on drilling 10 wells in the old shallow sand field in Nacogdoches County. The Cru-

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sader Oil Co.'s No. 1 Choate in Shelby County, is drilling around 2,225 feet.

The Roxana Petroleum Corp. has secured an extension for 6 months on a block of 4,000 acres in the northern part of Victoria County. The Houston-Gulf Gas Co.'s No. 1, near Raisin, in the same county, is around 1,200 feet. F. G. Ford has started No. 1 Anderson, in McLennan County, and H. Sitton's No. 3 Rhone, in Bosque County.

In the La Rosa gas district, in Refugio County, G. E. Smith is drilling No. 1 C. Heard. The Refugio Oil & Gas Co. is trying to close in Nos. 1 and 2 Lambert, both gas wells. Same company's No. 1 Thomas Heard is blowing gas. H. E. Bell, chief supervisor of the oil and gas division of the State Railroad Commission, has visited the district and ordered all gas wells shut in. The Houston Oil Co.'s Nos. 1-A and 2 Rook are drilling.

In Jackson County, the Houston Oil Co.'s No. 1 Rogers, west of Edna, is around 2,060 feet. The Vanderbilt Petroleum Co.'s No. 1 Seliner is preparing to resume drilling at 3,280 feet. The Jackson County Syndicate's tests are shut down.

In San Patricio County, the Sigmund Oil Co. is drilling No. 6 McCampbell.

Wildcat Tests Shut Down

A great many of the wildcats drilling in the Coastal Belt are temporarily shut down, some for financial reasons and others waiting orders. In Harris County, 7 miles north of the Houston city limits, the Retrieve Oil Co. set 8-inch casing and cemented No. 1 Westheimer, preparatory to testing a showing in a sandy shale around 2,800 feet. At Hockley, The Texas Co.'s No. 4 Warren is drilling around 3,010 feet and No. 5 Warren is below 1,650 feet. That company is making a formation test on Green's Bayou The Rycade Petroleum Co.'s No. 1 Norsworthy, east of Green's Bayou, is drilling below 3,600 feet. Baldwin and others' No. 1 Haney, north of the Goose Creek Pool, is around 1,300 feet. Baine & Quinn's No. 1 Hunt is below 1,500 feet and Wright and others' No. 1 Hunt is idle. The Seabrook Oil Co.'s No 1 at Seabrook, is shut down The La Porte Oil Co.'s No. 1 Powell is below 3,300 feet A derrick is up for a test near Little York village.

In Hardin County, Hooks and others' No. 1, northeast of Saratoga, is idle. The Texas Little Farms Association's No. 1 Hawley is idle around 2,250 feet.

In Jefferson County, the Gulf Production Co. has a location for No. 4 Thomas at Fannette. The Houston Oil Co's No. 3 Sun-Davis, Big Hill Dome, is drilling around 1,908 feet The Walton Oil Co. has started a test northwest of Beaumont. Former Governor Walton, of Oklahoma, heads the company.

In Chambers County, C. T. Rucker will deepen No. 1 Fisher. W. M. Dunman has a derrick up for No. 1 Lawrence. W. C. Moore's No. 1 Blanke has been temporarily abandoned at 625 feet. Barrett and others of Beaumont are drilling No. 2 Otter, northeast of Anahuac. The Roxana Petroleum Corp. has made formation tests north of Anahue.

In Brazoria County, the Thrift-Moore Co.'s No. 1 Munsen, 6 miles west of Angleton, is around 1,500 feet. Hamm & Co. is starting No. 2 Chester at Freeport.

Lease Convict Farm

The prison commissioners have leased the convict farm at Sandy Point to E. J. Evans, of Houston. A test is to be started within six months. The Roxana Petroleum Corp. recently secured a lease from the commissioners on the Retreive convict farm. The State has seven "convict farms" in various South Texas counties, embracing from 3,000 acres to as much as 15,000 acres. Prisoners, both white and black, are worked on these plantations raising cotton and corn.

Some of these plantations are within the saline dome horizon. The Blue Ridge Pool is on one of these convict plantations, which includes some 5,500 acres.

In Fort Bend County, the Rycade Petroleum Co. is drilling No. 1 Cox at 515 feet. Its No. 2 Wisdom is around 2,600 feet and No. 5 Nash is drilling around 354 feet The Gulf Production Co.'s No. 5 Moore on the Orchard Dome is drilling around 986 feet. The Texas Co.'s No. 1 Armstrong, southwest of Needville, is drilling around 4,010 feet.

In the Markham Pool in Matagorda County, west of Bay City, the Rycade Petroleum Co.'s No. 3 Gray is drilling below 3,985 feet. The Houston-Gulf Gas Co.'s No. 1 Myers there, a gasser, sanded. A derrick is up for No. 2 Myers. At Hawkinsville, the Gulf Production Co.'s No. 2 Craig is drilling around 2,365 feet. The Shepherd Mound Oil Co.'s No. 2 Hawkins is around 2,050 feet.

In Liberty County, the Liberty Production Co.'s No. 1 Seaburg is shut down at 550 feet. The Sun Oil Co. is starting No. 1 Masterson.

In Montgomery County, L. F. Sprague's No. 1, 4 miles west of Willis, is below 3,320 feet.

In Grimes County, McClausland & Rassmussen's No. 1, Dodd, 4 miles west of Iola, has recovered part of the pipe lost in the hole. The depth is around 3,860 feet.

The status of the deep sand tests drilling in Milam County is as follows: Magnolia Petroleum Co.'s No. 1 Kime, showing some gas around 3,828 feet; Butler Brothers' No. 1 Woodall, hard lime at 3,560 feet; Reiter & Foster and Simms Oil Co.'s joint No. 1 Stidham, drilling around 3,600 feet; J. K. Hughes Development Co.'s No. 1 Foster, drilling around 3,015 feet, and Lee & Gardner's No. 1 Isaacs drilling below 3,245 feet.

Big Gas Well

The Houston Oil Co.'s No. 10 Cartwright ranch in Live Oak County, is a gas well, capacity 30,000,000 feet. It has been closed in. Casing has been set and cemented in Nos. 11 and 12 Cartwright around 1,700 feet and they will be drilled in next week. Nos. 13, 14 and 15 are rigging for locations.

The Sinclair Oil & Gas Co.'s No. 1 Turner, south of production in the Orange Pool, bailed salt water at 3,210 feet.

Miscellaneous

A total of 909 tank cars of crude were shipped from the Laredo pools during August compared with 1,016 in July and 1,028 cars in June. Of the total August movement, 776 cars were consigned to Aransas Pass, where the crude was loaded on barges and towed to Texas City, Houston, Sabine, Port Arthur and Beaumont. The balance, or 133 cars went to Laredo and San Antonio refineries.

The Texpata Pipe Line Co., with gathering lines in Webb and Jim Hogg Counties, centering at Mirando City on the Mex-Tex railroad, has asked the State Railroad Commission for a rate of 10 cents per 100 pounds on crude shipments from Mirando City to Aransas Pass. The San Antonio freight bureau has filed a petition asking for a rate of 14½ cents per 100 pounds on crude from Mirando City to Somerset. The hearing will take place September 15.

In the Aviator Pool, the Rydal Oil Co.'s No. 13 Puig is a 70-lb. pumper at 1,735 feet and No. 14 is good for 50 bbls. at 1,738 feet. J. K. Hughes Co.'s No. 11 Puig is a 30-bbl. well. The Crown Central Oil Co abandoned No. 6 Quigg in salt water at 1,792 feet. Its No. 8 Garza is a 20-bbl. pumper and No. 24 is making 15 bbls. Morton Co.'s No. 1 Gracia is pumping 40 bbls.

SOUTHWEST TEXAS

(Continued from Page 46)

liam are shut down at 1,500 feet in No. 1 Alonzo Peeler in the extreme southern part of the county. A new test is being framed up to go to the Edwards in the northern part of Atascosa County and a little farther removed from the Balcones fault than most of the tests drilled thus far. Independent interests are to drill it.

Bastrop County

Wortham & Turner are preparing to drill in northwestern Bastrop County at a point about 3 miles east of the

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Plateau's test at Littig, in Travis County.

Bexar County

G. E. Smith and Joseph Noake are rigging up No. 1 Dietz, 15 miles east of San Antonio in Bexar County for an Edwards Lime test. Humble Oil & Refining Co. has not abandoned its No. 2 Minna Coreth which at 1,466 feet in the top of the Edwards got an enormous flow of sulphur water. The flow is estimated as being the largest ever encountered along the Balcones Fault. An effort is being made to pull the casing and it is understood the company has an intention of mudding off the water if possible and drilling the test deeper.

McClanahan and others in eastern Bexar County have erected a big rig on the Thompson tract where they recently developed a 3-bbl. well at 600 feet and will start a deep test to the Edwards lime. Formation tests by The Texas Co. and Plateau Oil Co. have been completel on the Walsh tract southwest of San Antonio, 7 miles and the location made by The Texas Co. geologist for the deep test which is now rigging up. It will be an Edwards lime test. The shallow formation tests are said to have established the location of the fault and the operators are hopeful of getting production. Marland Oil Co. in eastern Bexar County has not yet completed making its formation tests with diamond core machines. E. S. Bridge who drilled a dry hole in No. 2 Casanova at Elmendorff in southern Bexar County and missed the showing found in No. 1, is preparing to drill another test in the opposite direction from No. 1. Rycade Oil Corp. is continuing to add to its block of leases around Elmendorff.

Somerset Deep Tests

Ballard & Underwood have reached the Pennsylvanian at a depth of 4,077 feet in their No. 1 Eastwood in Somerset. This is their third deep test in that district but is much deeper than either of the other two. It is the deepest test in Bexar County and is attracting a great deal of attention because of its getting a slight showing of oil the Pennsylvanian. Until recently it was thought the Pennsylvanian would be out of reach of the drill in Bexar County. Failure to find production in the Edwards is causing many to give thought to drilling to lower formations. Texas Southern, an independent producing company in the Somerset Field which lost its first deep test started on its Avant lease, has started another test and is down to around 1,400 feet and will penetrate the Edwards at about 1,600 feet. The present hole is in good condition. Grayburg Oil Co. has completed its No. 15 Shaw in Somerset and is discontinuing drilling for the present.

Hitchman & Howard were incorrectly reported last week as starting a deep test in Somerset Field on their Schmidt lease. They will drill only to the regular Taylor Marl sand. Witherspoon Oil Co. has set and cemented casing in No. 3 Klemcke at 1,046 feet and in No. 7 Langley at 1,450 feet.

Mirando District

In Duval County the Associated Oil Co., on the G. W. Sutherland farm in western Duval at 1,780 feet has a showing of oil. It recently tested a showing at 1,404 feet and got a dry hole. Cooperative Oil Co.'s No. 2 Dinn is drilling at 1,600 feet and Killam's No. 3 Benavides in the Cole Petroleum Co. gas field is in lime at 2,790 feet.

In Zapata County, The Texas Co., which had a good showing at 3,237 feet in No. 1 Jennings and which it was first announced would test out has ratholed ahead while waiting for casing and at 3,400 feet has had better showings. At 3,310 feet it entered a hard sandy lime.

In Jim Hogg County Magnolia's No. 1 Bank is on survey 415 estimated at around 50 bbls. J. W. Pippin and others' No. 2 Palacious is down around 1,000 feet. Beaucamp's No. 1 Given subdivision is standing at 1,780 feet. In the proven pool Rydal Oil Corp. and Rycade Oil Corp. are moving in for the first of their No. 1 Vela on Block 7, the first of the tests on the 2,500 acres of leases bought from Wheatley. Rydal Corp. will drill the well. Kitselman & St. Albans No. 19 Vela set casing at 2,065 feet and drilled in and is making 150 bbls. No. 20 spudded in and shut down. Derrick is up for No. 6 Magnolia Petroleum Co. No 6 Martinez set casing at 2,063 feet.

In Webb County Associated is still standing at 1,623 feet in its No. 1 Westphal and shut down at 1,825 feet in No. 1 Lopez. Baltic is in rock at 3,320 feet and shut down for orders, having reached the contract depth. Cole Petroleum Co. is coring at 1,690 feet in No. 9 Benavides and Ball and others are in shale at 1,600 feet in No. 3 Puig and Crown Central is drilling in No. 6 Weslaco-Ochoa at 1,773 feet. Muckelroy is waiting for water on No. 1 de la Garza survey 335. Johnson & DeTray are setting up on No. 1 de la Garza on survey 335 the location being 450 feet south of the north line and 415 feet east of the west line. J. K. Hughes' No. 12 Puig is testing gas at 1,509 feet and Rydal's Corp. No. 14 Puig has been spudded in.

In Duval County United States Gas & Oil Co. is moving in the rig for the first of the tests on the Peters farm. It expects to develop a gas field to supply a proposed pipe line to San Antonio.

Jackson County

Workmen have been concentrated at Edna in Jackson County to begin laying the line of the Houston Oil Co.'s gas line from there to Houston. The line from the Live Oak County gas field on the Cartwright land to the Lavaca River at Edna has been completed and from that point to Gulf where the sulphur mines of the Texas Gulf Sulphur Co. are located.

Screen has at last been set in No. 3 Drushel of the Jackson County Oil & Gas Syndicate. The No. 2 which sanded up after running wild is to be celaned out and put on production again. The Houston Gulf Gas Co. is also getting ready to begin operations on its gas line from Refugio to Houston which will pass a few miles south of the gas field at Edna and will connect with it.

Houston Gulf Gas Co.'s wells at Refugio have broken loose and are running wild and for the second time the Texas Railroad Commissioners are on the ground. The No. 1 Wilson Heard was running wild in July but was successfully closed in by S. W. Blount, Jr., supervisor for the oil and gas division for this territory. Now No. 1 Thomas Heard is running through a 12-inch casing from 1,175 feet making millions of feet of gas and about 50,000 bbls. of water. The column of water at times goes twice as high as the derrick. Nos. 1 and 2 Lamberts are both in bad shape. The sand from No. 1 Thomas Heard has greatly hindered the Houston Oil Co. operating No. 2 Rook, which is only 300 feet away. Houston Oil Co. completed No. 1 Rook good for around 40,000,000 feet Houston Oil Co. is operating four rigs in the field and the Houston Gulf Gas Co. (Seagraves & Moody) are operating two. When No. 1 Wilson Heard was completed after running wild for a month it gauged over 70,000,000 feet.

Travis-Bastrop

The Bastrop-Travis-Caldwell-Guadalupe section is quieted down somewhat due largely to some of the wells being completed as dusters and lack of water to drill with. There are several new deals in process of being organized. Plateau Oil Co.'s well at Littig in Travis County is drilling in the chalk at below 1,500 feet and the Lund well 6 miles north is drilling at about the same depth. Some independents are about to start a test in Bastrop County three miles southeast of the Littig well. Alexander & Lyle's No. 1 Joe Spooner, which has been shut down for lack of water has managed to get water and is drilling. It had made but little hole after spudding in, and before shutting down.

In Caldwell County the Gulf Production Co.'s well got sulphur water in No. 1 Jim Cardwell about 4 miles north of Lockhart, the bottom of the hole being

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1,843 feet in Edwards lime, which was porous from the top. Wilford has resumed drilling on his Schroeder west of Lockhart and is in the Austin at 1,600 feet. He is getting the chalk lower than in the Sun Oil Co.'s No. 1 Stacey, which is shut down, when according to the regional dip it should have hit it higher. Payne & Bond's No. 1 Schawe is fishing at 1,570 feet. E. L. Smith Oil Co.'s No. 1 Leakey near Dale and in the eastern part of Caldwell is at 2,500 feet in the chalk

In Guadalupe County other than the Magnolia well in the southeastern part of the county, No. 1 Day, south of Luling, which is drilling and has not made much hole yet, there are practically no wildcat tests of importance excepting the Humble Oil & Refining Co.'s No. 1 Lowman, near Staples in the northern part of the county, which has just rigged up and begun to make hole. Scrivner and others' No. 1 Vetter, which got a dry hole in the Edwards at 2,080 feet and which started to drill for the Glenrose or other lower possible sands is standing with a fishing job on hand.

There are two tests being organized for the western part of the county. Scrivner will likely start one and Eeinert or the Atlantic the other. McClanahan and others' No. 1 Lenz is endeavoring to test out some shallow sands passed through before it went into the Edwards and got a dry hole.

Bexar County

Humble Oil & Refining Co. is trying ot shut off the big flow of sulphur water in No. 2 Minna Coreth, 2 miles southeast of San Antonio, which got the Edwards lime at 1,466 feet. The test may be carried down to some lower sand. A derrick is going in on the Ivan Vick land in the southern part of the county, 2 miles southwest of the juncture of the Medina River with the San Antonio River and about 10 miles south of Humble's Minna Coreth test. It is a little over a mile straight west of the dry hole of T. B. Slick on the Lamm farm. Slick is contributing acreage. Independents wi'l dri'l it. Derrick and rig are going up 15 miles east of town for the Smith-Noake test

Karnes County

Earl B. Reynolds is drilling at 3,047 feet in hard rock in No. 1 Butler in Karnes County and is planning to carry the test to 4,000 feet.

Kleberg County

Humble Oil & Refining Co.'s No. 2 Cross States, a successful wildcat 7 miles from Kingsvil'e on the Coast, is now making 125 bbls. daily on the pump and furnishing enough gas to run the pump. Derrick is up for an offset 300 feet away. No. 1 Dennett came in as a big gas well running wild but choked itself in. Humble is starting two other tests nearby its producer.

Milam County

John E. Lee's No. 1 Isaacs 4 miles north of Rockdale in Milam County is at 3,320 feet in the Georgetown, which it topped at 3,268 feet. It will be in the Edwards and ready to test before the week is out.

Zavala County

Old Dominion Co., which is drilling No. 1 Pryor on the west side of the Nueces River in Zavala County and on the Pryor ranch has closed a lease for the Nat M. Washer ranch and will drill at least three tests on the ranch. The first will be started at once and location is being made for it. It is north and west of the tests being drilled on the Pryor ranch. No. 1 Pryor is at 3,635 feet, shut down waiting for the crew to finish No. 1 Pryor of the Continental Oil Co., which had several joints of 10-inch collapsed. These were removed and 2,000 feet of 10-inch reset. Byrd-Old Dominion's No. 1 Pryor is drilling below 800 feet. E. L. Smith Oil Co.'s No. 1 Speer has spudded in.

LOUISIANA-ARKANSAS

(Continued from Page 44)

No. 1 Louisiana Oil Co., Section 29-9-2e, 9 miles directly south of Urania.

Imperial Oil & Gas Co. is drilling in shale at 2,236 feet in No. 1 Urania, Section 10-10-2e, 3 miles east of Urania.

J. P. White is waiting water in No. 1 Louisiana Central Lumber Co., Section 27-10-2e, 3 miles south of Urania.

Zeigen and others are W. O. S. R. at 1,570 feet in No. 2 Urania, Section 19-10-2e, and set 6-inch at 1,511 feet in No. 3 Urania, same section, offsetting discovery well.

Urania Petroleum Co. set 6-inch at 1,503 feet in No. 8 Urania, Section 19-10-2e, 2 miles southwest of Urania.

Lincoln Parish

Palmer & Bickley are arranging to abandon at 2,640 feet No. 1 Barrett, Section 13-20-3w, 2 miles north of Dubach.

Morehouse Parish

R. C. Boisseau and others are drilling in rock at 830 feet in No. 1 Sullivan, Section 11-21-7e, 10 miles east and a little north of Bastrop.

Ouachita Parish

Consumers Gas Co. set 6-inch at 2,140 feet in No. 1 Collins, Section 10-19-5e, in the north end of the Monroe gas field.

Southern Carbon Co. is drilling at 2,035 feet in No. 3 Kerr, Section 12-19-4e, 10 miles northeast of Monroe.

Ouachita Natural Gas Co. is drilling at 860 feet in No. 2 Liston-Waddel, Section 32-20-4.

Union Gas & Power Co. is drilling at 1,905 feet in No. 1 Lewis, Section 15-19-5e, 9 miles northeast of Monroe.

Red River Parish

Fortuna Oil Co. is drilling at 2,220 feet in No. 34 Continental-Polly, Section 7-22-10.

Union Parish

Ruston Drilling Syndicate is drilling at 580 feet in No. 1 Ford, Section 8-20-4e, 10 miles southwest of Bastrop.

Natural Gas Production Co. is drilling at 1,800 feet in No. 3 Graylin, Section 32-22-4e, 10 miles northwest of Bastrop.

R. U. Rhodes is drilling at 1,445 feet in No. 1 W. M. Jones, Section 6-23-2w, 20 miles northwest of Farmerville.

Winn Parish

Ohio Oil Co. is drilling at 2,750 feet in No. 1 Rowland, Section 5-12-1w.

Cotton Valley District

Fortuna Oil Co. has made a location for No. 2 J. Cox, Section 23-21-10, and set 10-inch at 456 feet in No. 4 R. R. Cox, Section 15-21-10.

J. F. Giles, trustee, set 10-inch at 600 feet, and is drilling in gumbo at 1,000 feet in No. 1 Weghost, Section 20-23-11.

Humble Oil & Refining Co. is drilling at 30 feet in No. B-21 Bodcau, Section 15-21-10, and set 10-inch at 475 feet in No. C-2 Bodcau, Section 13-21-10.

Louisiana Oil & Refining Co. is waiting on standard rig at 2,513 feet in No. 3 Bodcau, Section 25-21-10.

Ohio Oil Co. is drilling at 2,575 feet in No. 34 Bodcau, Section 15-21-10; set 6-inch at 2,570 feet in No. 16 Gray, Section 26-21-10; set 10-inch at 450 feet, and is drilling at 1,000 feet in No. 1 Sandlin, Section 27-21-10.

Palmer Corp. is drilling in broken lime, shale and shells at 4,005 feet in No. 1 Davis, Section 23-21-10.

Woodley Petroleum Co. set 10-inch at 450 feet, and is drilling at 620 feet in No. B-1 Gray, Section 27-21-10.

Arkansas Wildcats

Bradley County

Gulf Refining Co. is drilling at 1,130 feet in No. 1 Benson, Section 25-15-9, 16 miles south of Warren.

Calhoun County

Genther and others are drilling at 2,605 feet in No. 1 Freeman Lumber Co., Section 24-15-15, 3 miles north of the Smackover Field.

Gulf Refining Co. is drilling at 295 feet in No. 1 Freeman Lumber Co., Section 31-15-13, 13 miles northeast of El Dorado.

Jewett and others are drilling at 360 feet in No. 1 Freeman Smith Lumber Co., Section 35-15-13, 11 miles southeast of Hampton.

Murdock and others are reaming to bottom at 2,300 feet in No. 1 Eagle Lum

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ber Co., Section 29-12-15, 12 miles south and a little east of Hampton.

Columbia County

Gulf Refining Co. is drilling in gummy shale at 3,380 feet in No. 1 J. D. Hines, Section 17-17-18, 15 miles east of Magnolia.

Hude & Aarnes are still trying to pull liner at 2,119 feet in No. 2 Brown, Section 13-15-20, in the north end of the Stephens Field.

Magnolia Petroleum Co. is drilling in gumbo at 1,715 feet in No. 3 Rinehart, Section 36-15-20, 9 miles north of Magnolia.

Drew County

McClintock & Goodka are drilling in sandy shale at 1,700 feet in No. 1 Ogle, Section 35-13-5, 13 miles southeast of Monticello.

Hempstead County

Tarver and others are drilling in lime rock at 1,965 feet in No. 1 Swafford, Section 14-11-25, 8 miles northeast of Hope.

LaFayette County

Arkansas Fuel Oil Co. is drilling in lime rock at 2,075 feet in No. 1 Allen, Section 18-19-24, 2 miles east of Bradley.

Humble Oil & Refining Co. is drilling in rock at 1,180 feet in No. 1 Bodcau-Fee, Section 17-16-23, 5 miles east of Lewisville, and set 10-inch at 75 feet, and is down 325 feet in No. 1 Bodcau-Waldorf, Section 15-15-22, 1 miles east of the Bodcau-Fee well.

Kensaw Petroleum Co. is drilling in gumbo at 2,815 feet in No. 2 Red River Land Co., Section 3-20-24, just across the Louisiana line and 4 miles northwest of the Springhill district.

Miller County

Clifford Nash is arranging to abandon at 2,506 feet No. 2 Harvey, Section 2-15-26, 15 miles east and a little north of Texarkana.

Coplen and others are drilling at 2,255 feet in No. 1 Wiseman, Section 36-15-27, 10 miles east of Texarkana.

Davidson and others are drilling at 2,000 feet in No. 1 Faulk, Section 20-17-27, 12 miles southeast of Texarkana.

Humble Oil & Refining Co. is drilling at 900 feet in No. 2 Fouke, Section 2-16-27, 9 miles southeast of Texarkana, and is down 1,000 feet in No. 1 Dorsey, Section 2-17-26, 10 miles south of Lewisville.

Nevada County

Magnolia Petroleum Co. is drilling in gumbo at 1,900 feet in No. 1 R. F. Johnson, Section 3-15-21, 20 miles directly south of Magnolia.

Ouachita Valley Oil Co. is running core at 2,435 feet in No. 1 Phillips, Section 30-14-20, 4 miles northwest of the Stephens Field.

74 LAWTON SAND WELLS SHOW LOW AVERAGE

(Continued from Page 42)

No. 30 Hardy Murphy, NW NW SW, Section 4-16-15, was drilling at 2,640 feet, and its No. 28 Hardy Murphy, NE NE NE Section 9-16-15 was bailing at 2,646 feet.

Henderson and others' No. 2 Smith, NE NW SW Section 18-16-15, was coring at 2,940 feet.

The Lion Oil Refining Co.'s No. B-2 Murphy, NW NW NE Section 18-16-15 cored sand at 2,743 feet and was reaming.

Jones and others' No. 1 Wilson, NE SE NW Section 26-15-18 had sand at 2,314-18 feet and arrangements were being made to swab.

The Arkansas Fuel Co.'s No. 9 Snyder, SW SE SW Section 34-15-15 blew in with a heavy flow of gas and salt water while drilling plug at 2,490 feet.

The Amerada Petroleum Corp.'s No. 10 Lyell, SE NE NW Section 3-16-15 found Lawton sand at 2,562-71 feet and filled up 1,500 feet with fluid, with a showing of salt water.

The Unity Petroleum Co.'s No. 14 Roper, NW NE SW Section 3-16-15 set 8¼-inch casing at 2,541 feet.

The Amerada Petroleum Corp.'s No. 6 Calloway, NE NW SE Section 4-16-15 bailed dry at 2,569 feet and was washing with clear water preparatory to a retest.

The Imperial Oil & Gas Products Co. has a 20,000,000-foot gasser in No. 9 Murphy, SW SW NE Section 9-16-15. It blew in while the casing was being bailed. The crew was lubricating to shut off the gas and drilling will be resumed, total depth 2,639 feet.

Ramage and others were reaming to set 6⅝-inch casing at 2,582 feet in No. C-9 Lawton, NW SW NW Section 10-16-15.

E. M. Jones' No. 4 Cook, SE NW NE NW Section 16-16-15 is a 40,000,000-foot gas well from Blossom sand at 2,739-42 feet.

Walber's No. 1 Morrison, NW SE NE Section 12-18-14, southeast of El Dorado was drilling rock at 2,641 feet. The test may be abandoned before the contract depth of 2,700 feet is reached.

NEW JERSEY COMPANY PAYS $114,000,000 TAX

The Standard Oil Co. of New Jersey had aggregate net earnings before taxes of $480,000,000 in the five years ended December 1, last, the company says in a discussion of taxes in The Lamp, out of which it paid aggregate taxes of all kinds of $114,000,000.

Pointing out that taxes form the lifeblood of a community or nation, furnishing the funds for education, protection of property, delivery of mail, etc., the company says that in the last five years its tax bill represented 69 cents for every dollar paid to stockholders in dividends.

"Is such a corporation—and the Standard Oil Co. (New Jersey) is not unique—an asset or a liability to a country?" it asks. "Office holders living on salaries paid out of the revenue turned in by the tax gatherer, enacting legislation made enforceable only by appropriation met by taxes, have been wont to argue that the business which is a good servant so long as it is localized, or unimportant, becomes master when it grows large."

Regarding the net earnings of $480,000,000 in five years, it says: "First and foremost, there had to be laid aside out of every dollar that came into the treasurer's hands the Standard Oil Co.'s assessment for the carrying on of government. The people as citizens take precedence over a part of the people who are stockholders."

In the five years the company paid $165,000,000 in dividends, and adds: "The situation would look better to the stockholder if, after rendering unto Caesar that which is Caesar's, the treasurer could divide the remainder and send it out in quarterly dividend checks. Of this $480,000,000, out of which $114,000,000 went for taxes and $165,000,000 went for dividens, there remained $201,000,000. That money, at the rate of $40,000,000 a yer, has been needed to build ships, enlarge refinery equipment, construct pipe lines and tanks, build service stations—in short, to supply the new clothes needed for normal growth.

"If well invested, this money soon begins to work for the government and the stockholders, for it cannot be expended without an increase in local taxes, and if the property earns money a part of the profit goes to the Federal government. Uncle Sam is a partner in a corporation success only.

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FOR SALE—15 miles of 12-in. second-hand oil line pipe, and 8 miles of 8-in. second-hand oil line pipe, all with good threads and couplings. This pipe is in A-1 condition. For further particulars address
OHIO IRON & SUPPLY CO.
Lima, Ohio

MISCELLANEOUS

BOILERS AND ROTARY RIGS

One 85 h.p. Erie special, oil field type boiler $600
One 66 h.p. Lucey Mogul, oil field type boiler $500
Two 45 h.p. Erie regular, oil field type boiler .....$400 ea.
Two Johnson, Louisiana model, Rotary Drilling Rigs .....$7,000 ea.
One Union Tool, No. 3, Rotary Drilling Rig $8,000
One Union Tool, No. 5, Rotary Drilling Rig $12,000
All material in first-class condition, and ready to go. Would lease either or all of the drilling rigs to responsible parties. Union Tool No. 5 has 6-in. drill pipe and twin engine. Communicate with owners, 801 Travis Building, San Antonio, Tex.

FOR SALE — All kinds of second-hand machinery. We buy and wreck all kinds of plants. Send us your inquiries. THE ACME FOUNDRY & MACHINE CO.
Coffeyville, Kans.

UNIVERSAL DEEP WELL DRILL BIT
Selfsharpening, selfclearing, indestructible, continuous in drilling, cuts granite. G. Griesche, 2315 Carlton St., Berkeley, Calif.

OILPROOF and waterproof leather belts "Waterwitch" brand for refineries and natural gasoline plants. They wear longest. Manufactured by N. Palmer Belting Co., Bridgeport, Conn.

INSTRUMENTS FOR OIL REFINERS
Hydrometers, thermometers, centrifuge machines, viscosimeters, pyrometers, Griebel's standard oil thieves, Griebel's wax testing machines. All instruments are made as per A. S. for T. M. specifications. Complete line of laboratory supplies.
GRIEBEL INSTRUMENT CO.
1905-1925 Carbondale, Pa.

THE OIL and Gas Journal is read in Peru, China, Africa, Guatemala, Egypt, Alaska, Persia, Roumania, Spain, Switzerland, Czecoslavakia — everywhere. In fact, wherever there's oil, there are men reading The Oil and Gas Journal—"The Oil Man's Bible."

TANK CARS FOR SALE
23 steel underframe tank cars in fair condtiion. 1—4,000 gal, 4—5,000 gal., 1—6,000 gal., 7—8,000 gal and 10—10,000 gal. capacity. Address 325 Dwight Bldg., Kansas City, Mo.

PATENT lock coupling for oil drill stems; will do away with lost drill tools, this coupling is used. Patent illustration. Box 326. Woodward. Okla.

REGULATE your gas fired boilers automatically with Wilgus Gas Burner Regulators. Wilgus Manufacturing Co., 1722 E. 16th St., Los Angeles, Calif.

FOR SALE REFINERIES

WONDERFUL OPPORTUNITY to buy, or lease oil refinery. Write 17 Dunn, Great Falls, Mont.

REFINERY FOR SALE
Complete 500-barrel-a-day plant at Bowling Green, Ky., operated three years. Good as new. Will sell all or part.
Two 3200-bbl. riveted steel tanks.
One 1200 bbl. riveted steel tank.
Two 1000-bbl. bolted steel tanks.
Six 320-bbl. riveted steel tanks.
Six 250-bbl. riveted steel tanks.
Four 100-bbl. welded steel tanks.
Two carloads of 250-bbl. wood tanks.
Write the Tracy Supply Co., dealers in used oil well supplies, Bowling Green, Ky.

FOR SALE—500-bbl. refinery, well located. Local distributor will take entire output of gasoline. Liberal terms. First National Bank, Fort Smith, Ark.

ROYALTIES—PRODUCTION

GARFIELD COUNTY, OKLAHOMA
Leases—Royalties
Close in.
P. O. Box 212, Enid, Okla.

ROYALTY INTERESTS
Royalty Deed covering an undivided 1-64 interest in 40 acres offsetting well now drilling for $100. Excellent geological structure. Test well under contract to go 3,500 feet. You cannot beat this for a good gamble. A. F. Boudreau. P. O. Box 464. Sapulpa. Okla.

ROYALTY
Three wells starting on structure. Exceptional opportunity to buy high-class royalties. Quick action necessary.
JAMES R. THOMAS
Oklahoma City, Okla.

J. F. MARION COMPANY
Magnolia Building
Dallas, Texas
Buys and Sells
Texas Royalties
"Ask Us First"

WE OFFER the choicest acreage and royalties in the Garber Field; wire or write John W. Courtney, 407 N. Grand, Enid, Okla.

KAY COUNTY ROYALTY CO., INC
Ricks Building, P. O. Box 954
Tonkawa, Oklahoma
Dealers in Northern
Oklahoma Royalty
Individual Title Delivered
on Units $100 and Up.
Reference Bank of Commerce
Tonkawa, Oklahoma

LEASES—PRODUCTION

FOR LEASE for oil—160 acres, adjoining a drilling well, close to production, also royalties for sale. Will sell cheap. W. H. Freeman, R. F. D. No. 1, Hamilton, Kans.

I OWN oil mineral claims in Section 22, Township 21, Range 31, Eddy County and Section 8, Township 22, Range 32, Lea County, New Mexico. Will sell part of it in ten to forty-acre tracts.
ADDRESS EOPSOMA
P. O. Box 664 Dallas, Tex.

—A REAL BUY—
Wonderful oil leases in New Mexico in Torrance, Lea, Valencia, Lincoln, 50 cents to $2.50 per acre; also maps showing wells, locations, drilling, $1 each. Kingsley, 508 Stanford Ave., Los Angeles, Calif.

35 CENTS a line first insertion; 25c a line each additional insertion. Cash in advance.

CLASSIFIED WANTS

CREATE AND BUILD BUSINESS

MAIL your advertisement now. It will be published next week. Cash with order.

LEASES—PRODUCTION

LEASE DEALERS ATTENTION
I am asking price of $5 and $10 per acre, subject to advance, on leases around a deep test I am drilling in Western Kansas, not far from test. Have had two good showings already, and this test is financed to go 4,000 feet, unless oil or gas is found at a lesser depth. Leases are in 40-acre blocks or more. Address P. O. Box 876, Kansas City, Mo.

3,000 ACRES, 20-year leases, Morgan County, Colorado, for well to be commenced soon, also other drilling propositions. Wire or write, E. Fackler, Manchester, Kans.

SOUTH Of Luling, Tex., 5,000 acres, high-class geological survey, sent on request; want some one to finance drilling. J. W. Flournoy, Cuero, Tex.

LEASES on excellent structure containing oil and gas seepages; close in to test well now drilling near Salem, Mo. Will give plenty of acreage for well or sell some. Box 230, Findlay, Ohio.

MISSISSIPPI will meet light oil demand. 10,000 acres Calhoun County for well. Free report. Brooks, 282 S. Front, Memphis, Tenn.

OIL LEASES and Royalties, Seminole, Pottawatomie Counties. Communicate with I. H. Townsend, Konawa, Okla.

HAVE SEVERAL pieces of flush and settled production for sale in Wichita Falls district. Prices very reasonable and terms can be arranged if necessary. Address R. L. Steiner, P. O. Box 1144, Dallas, Tex.

SOUTH TEXAS oil leases and drilling contracts on good structure. Write us for full particulars and tell us your wants. Gulf Leasing Co., 525 Brady Bldg., O. C. McLeod, Mgr., San Antonio, Tex.

SOUTHEAST NEW MEXICO
Can furnish practically proven leases in Artesia Field, Eddy County. Also other tracts in Eddy, Chaves and Lea Counties. Particulars on request.
H. T. ORCUTT
816 Colcord Bldg. Oklahoma City, Okla.

YOU have your organization and can give good service. Does the Billion Dollar Petroleum Industry know it? Have you made it easy for oil men to order from you? If not, the surest and best way to promote the merits of your company is to use The Oil and Gas Journal—the oldest and best petroleum publication in the world.

FOR PANHANDLE oil leases and drilling contracts, write Dr. W. R. German, Canadian, Texas.

FOR SALE
Oil and gas leases at $1.50 to $2.50 per acre around 3,500-foot test now drilling on excellent geological structure. A real play that is a bargain. Room 812 Kennedy Bldg., Tulsa, Okla.

LEASES, FIVE AND TEN DOLLARS PER ACRE
Around a test now drilling in Western Kansas and is financed to go 4,000 feet unless oil or gas is found at a lesser depth. Have had two good showings. Leases of 40 acres or more and not far from test. I must have quick action and am asking bargain prices on leases, subject to advance. Address P. O. Box 876, Kansas City, Mo.

FOR SALE
My half, or 20 acres, of 80-acre tract in Okmulgee district, Section 32-16-12e. None but atrtactive offers considered. Florena Gabe, 5132 Wabash Ave., Apt. A, Chicago, Ill.

FOR SALE—10-bbl. settled production in Hancock County, Kentucky; also choice acreage joins production. No. 2 National Machine. Address Bert Thompson, Pellville, Ky.

FOR SALE—Oil leases, well located, West Texas. Two drilling blocks, 8,500 acres each. Choice river ranches for sale. Box 244, San Angelo, Tex.

FOR LEASE—60 acres, Section 24, Township 4s, 1w; and 84 acres, Section 19, Township 4s, 1e, all in Carter County, Oklahoma, 8 miles west of Ardmore, for cash only. Richard Seedig, Route 3, Chelsea, Okla.

OIL AND GAS LEASES
Marathon Fold—West Texas
12,000 acres University Permits, Pecos County, dated October 1, 1924, 5 years. The new law makes these permits most attractive. Can be subdivided into 40-acre tracts. Near Sun, Gulf, Dixie, California Company, Phillips, Arkansas Fuel, Humble holdings.
10,000 acres Crockett County. Large and small blocks; adjoining big companies; scattered wildcat; also close-in adjoining World well block.
20,000 acres, 10-year leases; low rentals; Terrell County. Getting good play. Watch this country. Prices right.
5,000 acres Upton County. Scattered tracts; blocks for drilling.
60,000 acres, one-block Southeast Pecos County, on geological formation. Most attractive as to desirability, price and terms.
2,000 acres, Irion County, 10-year lease; watch the new work here.
12,000 acres, Loving County; 10-year lease, 10-cent rental.
Write for prices and maps. Will allow time for geological inspection.
C. W. WEBSTER
W. T. Waggoner Bldg. Ft. Worth, Tex.
Reference Mercantile Agencies

LARGE DRILLING BLOCKS
Approved Geology in Arkansas
Have 10,000 acres on well defined structure by four prominent geologists, two of Tulsa. There is a 6,500,000 gasser on this structure, had a good show of oil at 1,185 feet, another block of 18,000 acres equally defined by two prominent Tulsa geologists. Want a test well on each. Leases are 88 producers special 10 years 50-cent rentals. Also have some cheap one-half perpetual royalty on each of these structures. Only bonafide developing companies or individuals need ask for further information.
D. W. JOHNSTON
Care Hotel Main Clarksville, Ark.

NEW MEXICO oil leases are turning at handsome profits. Here's your opportunity to secure a lease near drilling well in Southeast Trend, where the real pool is expected to be opened. Maps and information upon request. Brokers and lease salesmen wanted. Address Box 667, Roswell, New Mexico.

THE ORGANIZATIONS that get the bulk of the oil industry orders are those who are known to the industry and who can combine quality with speedy service.
If you had your equipment listed in this section it would receive the same consideration that thousands are giving the good equipment advertised here.

WILDCAT drilling leases, Southern Oklahoma, 40 or upwards to 360 acres. For particulars write owner, T. R. Jackson, 201 Foster Avenue, Rockford, Ill.

LEASES—PRODUCTION

WEST TEXAS Marathon Fold oil leases. Personal investments since 1919. Write for data and maps. Paul Konz, P. O. Box 291, Fort Worth, Tex.

CHOICE ACREAGE—New Mexico, Colorado, Hiwatha, Piney, LaBarge, Wyoming. Either sell outright or lease to responsible promoters or operators. Cash or royalty. Hartman, Symes Bldg., Denver, Colo.

WE OFFER choicest gas territory in Pennsylvania for lease. Write S. J. Brendel, 704 Peoples Bank Bldg., McKeesport, Pa.

PATENT ATTORNEYS

REGISTERED PATENT ATTORNEYS
United States and Canada
Before disclosing your invention to anyone, send for blank form
Evidence of Conception
Bulletin "How to Establish Your Rights," and complete information free.
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LETTERHEADS—PRINTING

CONSUMERS' LEDGERS
We are prepared to furnish from stock standard forms of gas meter Consumers Ledgers. Sample forms and quotations on request. First class material and workmanship.
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OIL FIELD LEGAL BLANKS—Leases, assignments, releases, township books, well records, etc. Request on your letterhead gets free catalog. Olds Press, 215 East Third St., Tulsa, Okla.

PATENTS

PATENT-SENSE—Valuable book free for inventors seeking largest deserved profits. References include prominent oil men. Write Lacey & Lacey, 718 F. St., Washington, D. C. Established 1869.

POSITION WANTED

GRADUATE mechanical engineer, age 32, commercial and executive as well as engineering experience, would like to form connection with some branch of oil industry. Would like position with concern offering opportunities for advancement or would consider buying active interest in established business such as gasoline extraction or carbon black manufacture or other business of forming connection with well qualified persons to undertake a business of such nature. References exchanged. Box A-920, The Oil and Gas Journal, Tulsa, Okla.

REFINERY manager or superintedent desires connection with reliable company. Can supervise construction, understand refining in all its phases, namely, toping, lube, waxes, compounds and cracking. Maintaining low refining cost and high plant efficiency. Address Box A-893, The Oil and Gas Journal, Tulsa, Okla.

Through the Classified Wants Section you can interest 25,000 oil men in your product or want. Mail your advertisement now for next week's issue. It doesn't cost much!

CHEMIST—University graduate with 10 years experience in practical refinery work—thorough plant supervision and laboratory control—development and research—economical distillation and treatment for all finished products—grease make—efficient handling of plant and men. Good references. Address Box A-891, The Oil and Gas Journal, Tulsa, Okla.

POSITION WANTED

JOB WANTED—Young man, 35; university graduate, with considerable leasing experience wants job with reliable oil company in land department where there is opportunity for advancement as reward for faithful service. Address Box A-890, The Oil and Gas Journal, Tulsa, Okla.

REFINERY BUILDER AND OPERATOR
Experienced, practical constructor and operator, 17 years in petroleum industry, good executive and organizer, low construction and operating cost; desire connection with established company or someone intending to start in the refining business. Can take full charge. Box A-855, The Oil and Gas Journal, Tulsa, Okla.

MARRIED MAN—Age 35 years, desires position as drilling superintendent or foreman; 18 years' experience in all fields of U. S. A., Burma, Java, Sumatra, Venezuela and Poland. Both cable and rotary experience. Can handle the job from the location stake to running of production in storage. Strictly temperate; can furnish best of references; will go anywhere. Box A-910, The Oil and Gas Journal, Tulsa, Okla.

HELP WANTED

EXECUTIVE, ENGINEERS, $3,000-$25,000, find our individual, confidential service effective in making new connections. Personally conducted by Mr. Jacob Penn, the eminent employment authority, known to leading business men throughout America. Not employment agency. Jacob Penn, Incorporated, 305 Broadway, New York City, N. Y.

WANTED

PRODUCTION WANTED—500 barrels or more per day of emulsified oil to clean on royalty basis. H. C. Dahl, 127 Grand Ave., Long Beach, Cal.

WANTED — To exchange for small producing oil property 320 acres of McHenry County, North Dakota land, 1½ miles town of 400 on Great Northern Railway. Address Box 211, Chariton, Iowa.

ADVERTISING RATES

	1 Time	2 Times	3 Times	1 Mo.
3 lines	1.05	1.80	2.55	3.30
4 lines	1.40	2.40	3.40	4.40
5 lines	1.75	3.00	4.25	5.50
6 lines	2.10	3.60	5.10	6.60
7 lines	2.45	4.20	5.95	7.70
8 lines	2.80	4.80	6.80	8.80
9 lines	3.15	5.40	7.65	9.90
10 lines	3.50	6.00	8.50	11.00

These Rates Effective September 1, 1925
Six words usually make a line

Compute white space at the above rates
Mail your advertisement to

THE OIL AND GAS JOURNAL

Tulsa, Oklahoma

WANTED—Party to complete an oil well in Mississippi on any reasonable terms. Present depth over 5,000 feet. Geologist's report favorable. M. W. Haney, Geer, Va.

Additional Classified Want Advertisements on following page

35 CENTS a line first insertion; 25c a line each additional insertion. Cash in advance.

CLASSIFIED WANTS

CREATE AND BUILD BUSINESS

MAIL your advertisement now. It will be published next week. Cash with order

CONTINUED FROM PRECEDING PAGE

WANTED

WE WILL buy diamonds (Brazilian carbons); also Star, Rotary or cable oil well drilling tools. St. Louis Exploration Co., 5790 Kingsbury Place, St. Louis, Mo.

WANTED—Producing royalties Oklahoma and Kansas. Give full details. P. O. Box 502. Independence, Kans.

SHALLOW Kansas production would trade for Florida land. Address Production, 301 E. 7th Avenue, Tampa, Fla.

BUSINESS OPPORTUNITY

CORE-DRILL your structure before putting cable tools at work. It will save you time and money. St. Clair Exploration Co., Diamond core-drill contractors. Established 1903. Geo. H. St. Clair, Mgr., Minneapolis Minn.

STOCK SELLING

Corporations desiring capital for promotion, development or expansion are invited to communicate with the undersigned.

Courteous considerations; prompt action; established reputation, complete facilities for campaigns of any size.

WILLIAM R. THURSTON

83 West 42nd St. **Telephone**
New York City **Longacre 4990**

ADVERTISING RATES

	1 Time	2 Times	3 Times	1 Mo.
3 lines	1.05	1.80	2.55	3.30
4 lines	1.40	2.40	3.40	4.40
5 lines	1.75	3.00	4.25	5.50
6 lines	2.10	3.60	5.10	6.60
7 lines	2.45	4.20	5.95	7.70
8 lines	2.80	4.80	6.80	8.80
9 lines	3.15	5.40	7.65	9.90
10 lines	3.50	6.00	8.50	11.00

These Rates Effective September 1, 1925
Six words usually make a line

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THE OIL AND GAS JOURNAL

Tulsa, Oklahoma

HAY FEVER

If suffering with Hay Fever get a bottle of L. E. P. Liquid or 25c jar of L. E. P. Balm from your druggist. Apply in nostril with tip of finger and inhale. Made by L. E. P. MFG. COMPANY, Sterling Kans.

OPPORTUNITY—Will lease up to half million acres for you on well defined series of structures in one county, worked over by three well known geologists, will handle on salary basis, plus 10 per cent of net profits derived from development, investigation invited. Address W. S. C. 345 South Franklin, St., Denver, Colo.

BUSINESS OPPORTUNITY

DO YOU NEED MONEY for organizing or financing oil, mining or other propositions? Phone M 7794, write, 35 E. Tenth, Oklahoma City, Okla.

PRIVATE OWNER will sell a $1,000,000 Pittsburgh mansion for $550,000. A big bargain; 36 rooms. Three years to build. For further particulars write Box 1509, Pittsburgh, Pa.

THE ORGANIZATIONS that get the bulk of the oil industry orders are those who are known to the industry and who can combine quality with speedy service.

If you had your equipment listed in this section it would receive the same consideration that thousands are giving the good equipment advertised here.

SAN ANTONIO MANSION—On prettiest corner on Laurel Heights, overlooking entire city; 15 rooms, beautiful galleries and grounds, solid brick both outside and inside walls, beautiful trees and shrubbery. Value $100,000. Reduced for quick sale to $60,000. W. J. Long, Realty, 410 Gunter Building, San Antonio, Texas. Exclusive agents.

BRANCH OFFICE SERVICES

NEW YORK Mail Address $2 monthly, Other services $3 up. Write for circular. 32 Union Square, Room 501.

ADDRESSES WANTED

WANTED to know the address of Bob Sisk, last heard of west of Tampico, Mexico. Please write A. P. Gilliland, R. R. 1, Boonsville, Tex.

MAIL LISTS

GUARANTEED list of over 200 bona fide lease buyers in Tulsa including all principal operators, giving land man's name, address and telephone. $5.00. Imperial Listings, 836 Kennedy Bldg., Tulsa, Okla.

INCORPORATIONS

CHARTERS—Delaware best, quickest, cheapest, most liberal. Free forms. Colonial Charter Co., Wilmington, Del.

IN READING The Oil and Gas Journal you will be taking the best means possible to keep yourself acquainted with the progressive developments and changes that are continually going on within the industry.

DELAWARE incorporators. Charters, fees small, forms. Charles G. Guyer, 901 Orange St., Wilmington, Del.

FOR SALE—MAPS

ABSTRACT MAPS
Copyrighted

Gives lease and royalty owners, addresses, expiration date, oil development, Government bench marks, and complete information on restricted Indian lands. Made in township units. As map gets out of date it may be exchanged for new one showing all changes in ownership and development for one-tenth original cost. Covers all live areas in Oklahoma and Kansas.

Famous throughout the oil fields.

MID-CONTINENT MAP COMPANY
Dept. A., Bank of Commerce Bldg.
Tulsa, Okla.

FOR SALE—DOGS

BEAUTIFUL registered bull pups cheap. Tonn, 501 Rockwood, Dallas, Tex.

Humphreys Will Use Torsional Balance to Test for Salt Domes

DENVER, Colo., Sept. 5.—The Humphrey Corp. preparatory to a drilling campaign in search for oil in the salt dome region of the Texas Gulf Coast, is beginning a survey of the region with the Elliott torsion balance. Two of these instruments, which are imported from Germany, are already in operation and four more will be ordered.

It is claimed for the device that a salt dome which has no surface suggestion whatever, to indicate its presence, cannot only be accurately located but that its apex as well as the gradations of its contours and the position of its surrounding syncline can be accurately determined.

The Elliott torsion balance has no ability to determine the location of oil, but only locates the salt dome; and it is the plan of the Humphreys corporation, after the salt mass has been found to test for oil by means of diamond drilling, preliminary to opening up wells in the regular way, with standard of rotary tools.

Instrument Briefly Described

The Elliott torsion balance consists of a platinum coil spring supporting a half-pound weight and inclosed in a glass tube. Transit sights with cross lines also are a part of the instrument and through these the observer makes readings on a graduated portion of the spring.

These readings indicate the specific gravity of the mass below the instrument, and by laying out an area in squares and making readings at each corner a salt dome can be detected and mapped out, the "pull" on the spring being greatest at the apex and lessening gradually in all directions as the syncline is approached. A logarithmic table applied to the reading on the instrument gives the pitch of the contours.

Humphreys Operating Plans

President A. E. Humphreys has issued a statement to the stockholders of Humphreys corporation outlining the plan for the winter campaign, which says in part:

"On April 1, 1925, we recognized Humphreys-Boyd Oil Co. and are now operating under the name of Humphreys corporation, which company possesses all the assets of the Humphreys-Boyd Oil Co.

"The company now holds acreage in Reagan, Pecos, Throckmorton, Eastland, Young, Walker, Navarro, Montague, Henderson and other counties within the State of Texas consisting of approximately 45,000 acres of leases. It has about 600 bbls. of production daily located in Navarro and Montague Counties.

"Studies in West Central Texas, where we have a number of structures blocked and others under consideration, give much promise. In this district is the Big Lake or Reagan Oil Field. We are going to start a test in a block northeast of the Big Lake Pool. We are also drilling a wildcat test in a block of acreage which we have in Jack County, Texas."

RED RIVER DECISIONS ANNOUNCED BY WORK

WASHINGTON, D. C., Sept. 5.—In a decision on the Red River Texas-Oklahoma oil field cases, Secretary Work held that 18 claims were meritorious and directed that $2,141,898 be distributed to satisfy them. The applications of 46 claimants for leases and prospecting permits were rejected.

All the leases allowed will be executed in the near future. Citizens and domestic corporations awarded leases must be in a position to enter the premises in the Red River area and take over operation of the property December 1, 1925. Payment of the impounded funds will not be made until that date.

Receipts from oil production upon the area upon which no leases or permits were issued, amounting to $405,000, will go into the Federal treasury.

Out of a total of 1,261 acres involved, the leases and permits awarded cover 730 acres. The remaining 531 acres will be held for future disposal by the Government.

Those given awards were Ben Bergerman, trustee, Pueblo, Colo.; Pacific Wyoming Oil Co., Denver, Colo., (two awards); Arthur S. Beymer and others, and National Exploration Co., Denver; Burke Divide Oil Co., consolidated, Terre Haute, Ind.; Lone Star Refining Co., Kansas City, Kans.; Thomas A. Gall, and others, Minneapolis; J. M. Wakefield and others, Minneapolis; W. F. Corts Drilling Co., Columbus, Ohio; A. E. Pearson and others, Oklahoma City; Tom Testerman, Oklahoma City; Melish Consolidated Place Oil Mining Association, Oklahoma City; Mutual Placer Oil Mining Association, Frederick, Okla.; General Oil Co., Houston, Texas; Buckeye Petroleum Co., Wichita Falls, Texas; Southwestern Petroleum Co., Wichita Falls, Texas; Delta Oil Co., Wichita Falls, Texas, and James M. Patterson and others, Wichita Falls, Texas.

Some of the winning claimants were awarded both leases and cash payments out of the impounded funds and some were awarded only leases and permits.

The list of those given awards as made public at the interior department follows:

Ben Bergerman—Lease covering 13.5 acres, and permit covering 19.5 acres.

Pacific Wyoming Oil Co.—(First claim), lease to 67 acres as lessees from locators on the Lonnie Lee placer mining claim; (second claim), lease to 14.4 acres as lessee of H. L. Roberts and others, Frederick, Okla., and $11,654 out of the impounded funds.

Arthur S. Beymer and National Exploration Co., permit to 10.2 acres.

Burke Divide Oil Co., expecting permit and lease covering 227.1 acres and $693,502 of impounded funds.

Lone Star Refining Co.—Lease to 10.9 acres and $228,624 of impounded funds.

Thomas A. Gall—Lease to 4.6 acres.

James A. Wakefield—Lease to 29.7 acres

W. L. Corts Drilling Co.—Lease to 6.7 acres and $49,258 impounded funds.

A. E. Pearson—Lease to 16.6 acres and $145,567 impounded funds.

Tom Testerman—Lease to 1 acre and $101,938 impounded funds.

Melish Consolidated Placer Oil Mining Association—Prospecting permit, lease to four tracts consisting of 222 acres and $40,857 impounded funds.

Mutual Placer Oil Mining Association—Prospecting permit to 10.3 acres.

General Oil Co.—Lease to 13.8 acres and $318,542 impounded funds.

General Oil Co.—Lease to 13.8 acres and $318,542 impounded funds.

Buckeye Petroleum Co.—Lease to 6 acres and $22,252 impounded funds.

Southwest Petroleum Co.—Lease to 4.3 acres and $85,837 impounded funds.

Delta Oil Co.—Lease to 13 acres and $45,288 impounded funds.

James M. Patterson—Lease to 40 acres.

RUSSIAN EXPORTS FOR '24-'25

Exports of petroleum products by the Soviet Union Government during the first three-quarters of the 1924-25 operating year (October, 1924, to June, 1925) show a large increase over those for the corresponding period of 1923-24. According to data published in the July 15 issue of the Bulletin of the Council of the Petroleum Industry, Moscow, shipments for the nine months ended June, 1924, and 1925, amounted to (quantities in metric tons of 2,204.6 pounds):

Russian Exports of Petroleum Products for Nine Months

Products—	October 1923, to June, 1924 Tons	October 1924, to June, 1925 Tons
Crude petroleum	30,400	40,500
Gasoline and benzine	102,800	210,600
Kerosene	248,300	275,900
Solar oil	42,200	57,100
Machine oil	57,400	73,100
Other lubricants	9,300	14,300
Fuel and gas oil	23,700	271,700
Total	514,100	943,200

For AMBULANCE Service
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MARTIN FLEMING UNDERTAKING CO.
Prompt and Efficient Service
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Northern Oil Information Bureau
Shelby, Montana
Complete weekly drilling and operating report of Kevin-Sunburst field mailed to any address, $10 for four reports. Maps and logs for sale. Best of references.
We maintain geological, land and field departments, all in expert hands.

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U.S. PATENT ATTORNEY
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514 Scientific American Bldg., Washington, D. C.
403 Tower Building Chicago, Ill.
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County and District
Catalog on Application
HEYDRICK MAPPING COMPANY
Wichita Falls, Texas

Capital Abstract & Realty Co.
W. S. Bell L. B. Norton
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Aprons, Towels, Jackets for Rent
Towel Service for Office $1.50 Mo.
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General Insurance
Derricks, Tanks and Contents Insured
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GEO. W. HENRY, Printer
"Better Printing"
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General Abstractors
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11 S. Park St. Sapulpa, Okla.

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KENTUCKY-TENNESSEE

(Continued from Page 34)

Brown, cleaning out; the Kentucky Oil Syndicate is starting No. 19 Amanda Stewart on a north line between Nos. 4 and 10.

Cumberland County

The only well finished during the week in the Cumberland County territory is A. S. McClintock's No. 5 Anderson, at Kettle Creek, good for 25 bbls. in the pay below the Pencil Cave. In this same field the Daniel Boone Oil Co.'s No. 8 Lucy Logan is drilling at 90 feet; E. D. C. Lynch is rigging up on his Cain tract to offset No. 3 Maude Blythe which came in last spring flowing 35-bbl. per hour. This Maude Blythe well, after flowing about 10,000 bbls. of oil blew out with an enormous gas pressure after which it "came back" and is now doing 50 bbls. daily. It is between Kettle and Judio Creeks. W. S. Raydure has plugged No. 1 J. Crawford at 775 feet; Coe Brothers No. 1 Mary Scott is shut down waiting on fishing tools.

Sulphur Creek Development

W. S. Raydure's No. 2 M. E. Coop is again on the pump attempting to exhaust water from the sand which came in when the casing broke loose. The water is decreasing at present and the well is pumping 15 bbls. daily. This same operator is moving a rig to No. 2 Riddle to deepen it from the second Sunnybrook sand to the 400-foot pay below the Pencil Cave; Kanawha Oil Co.'s No. 3 L. J. Coop which is drilling at 970 feet, 417 feet below the Pencil Cave, will be drilled to 1,100 feet and possibly to 1,400 feet in an attempt to pick up the same pay the Kanawha company got in its well on the Prong of Sulphur Creek; Hook & Wise's No. 1 Vess Nun has been finished at 1,050 feet, 400 feet below the cave. The cave in this test was found 33 feet above sea level and was located in a synclinal trough; Wilcox Brothers' No. 1 Melton, on Williams Prong of Sulphur Creek, is progressing at 500 feet.

Bear Creek

R. S. Thrasher and others' No. 1 Bill Page, on the John Bow Hollow, was drilling at 225 feet. This is a rank wildcat and is on an anticlinal nose extending southwest from the south branch of the Meshack Uplift. It is located geologically on structure and will probably open a new pool. Freeman & McCormick's No. 5 T. L. Bow is without a showing in the First Sunnybrook sand. The sand pinched out from a thickness of 32 feet in all other wells on the lease to but 2 feet in this well. Top of the sand was found in proper position showing the pinching out to be from the bottom. This indicates a rise in the cave and the well will be drilled to the lower pays.

Sarah Sheckles' No. 4, being drilled by Wilcox Brothers' is making salt water in the First Sunnybrook sand. It is 100 feet from a fault. The first Sunnybrook dipped 23 feet in a short location from No. 3 which is estimated good for 25 bbls.

J. G. Whitlatch has made two locations on the G. W. Strange farm at Renox Creek. He has already drilled three wells which are producing amber oil at a depth of 60 feet, according to reports.

The Alta Oil & Gas Co. will deepen its No. 3 C. T. Cheatham, on the west fork of Crocus Creek, to the pays below the cave. Same concern has made a location on the Orville Cheatham.

The Morris Petroleum Co.'s No. 4 Hunter Short, at Galloway Creek, was making headway at 750 feet.

Wildcat to Be Started

According to Noble L. Wood, the first well to be drilled in late years in the vicinity of Columbia, will be on the J. H. Morgan lease in a bend of Crocus Creek, about a mile south of Hopewell Church, at the junction of Harrod's Fork and Crocus Creek. It is but a quarter of a mile from the old Garrett well drilled in 1866. Two other locations have been made by Mr. Wood, one on the Guthrie tract, 300 feet south of Hopewell Church, and the other on the Saddie Blesdoe

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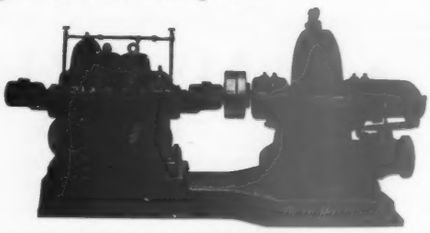

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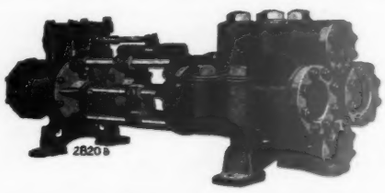

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place, less than a half mile north of Hopewell Church. The Morgan and Garrett tests will be in northern Cumberland County while the Blesdoe test will be in Adair County.

Clinton County

The Vedder Oil Co.'s No. 5 Tompkins heirs on Fannis Creek, in Clinton County, is drilling at 380 feet. It is a direct offset to No. 1 M. C. Scott. Oil has so far been picked up in the stray sand found at 190 feet and at 230 feet where it showed for 5 bbls. naturally. The Mutual Oil & Coal Co.'s test on the B. M. Thurman has been abandoned at 750 feet, 150 feet below the Pencil Cave.

Other Completions

In Warren County, William Getting's No. 3 J. Smith, in the Belcher area, is dry and plugged at 1,267 feet; Hogan Brothers' No. 1 Baker-Jones, 8 bbls. at 1,000 feet. Shale was from 770 to 845 feet and the sand from 936 feet to 944 feet, which was shot with 30 quarts of nitro. In the McLemore Pool, P. H. Levelle's No. 7 W. R. Hutton pumped 6 bbls. at 608 feet; unknown parties got a dry one on the Balois tract, near Rockfield.

Two miles south of Scottsville, in Allen County, Bastrus and associates finished Nos. 1 and 2 Hewitt, estimated at 2 bbls. each at 30 feet below the shale; Keyes Oil Co.'s No. 1 Smith, same district, dry; Dayton parties' No. 4 Miller, Justice Pool, dry at 300 feet.

J. H. Thompson's No. 1 Proctor, near Woodburn, in Simpson County, is reported plugged and abandoned at 420 feet.

Eastern Division

Very little of interest prevailed in the eastern division the past week. There were only 10 completions made, six of them oil wells with a flush of 59 bbls. The best is Dillon and others' No. 6 J. A. Brown in District No. 13, Wayne County, good for 25 bbls. from the Beaver sand.

The Mid-South Oil Co. got a dry hole in its wildcat test on the Jeff Williams place at the head of Little Fork of Little Sandy. It was drilled through the Weir, Corniferous and Berea sands.

Johnson-Magoffin Counties

In the South Weir Field of Johnson and Magoffin Counties, the Petroleum Exploration finished two small pumpers on the Abe Caudill tract in District No. 25. No. 36 is estimated at 8 bbls. and No. 37, at 9 bbls. from the Weir sand. In the same district, the Diamond Oil Co.'s No. 6 Bailey heirs is reported good for 8 bbls. from the Weir.

North Weir District

In district No. 22 of the North Weir sand district of the Lawrence and Johnson Counties fields, the Union Gas & Oil Co.'s No. 5 Caney Sparks is pumping 5 bbls. from the Weir sand and No. 3 R. N. Sparks' No. 1 farm, 4 bbls. from the Weir pay.

In Floyd County, the American Roller Mills Co. is reported with two small gassers on the fee lands of the company near Summitt.

Hupp & Duff's No. 2 Mays, near Idamay, in Lee and Owsley Counties, is reported as a dry hole in the Corniferous sand.

CENTRAL WEST

(Continued from Page 34)

the southwest quarter of Section 34, and Robinson & Burke's test 1,200 feet from the north line and 250 feet from the west line of the Joe Sanger farm, in the northwest quarter of Section 25, pumped less than a barrel of oil.

In Washington Township, Sandusky County, the Auxter Oil Co.'s test, 500 feet from the north line and 200 feet from the west line of the L. M. Auxter farm, in the southwest quarter of Section 5, pumped 10 bbls. Top of Trenton at 1,251 feet and total depth 1,301 feet. In Jackson Township, same county, the Port Clinton Oil Co.'s No. 6 in the northwest corner of the George F. Hoffman farm, Section 4, pumped 2 bbls. Top of sand at 1,307 and 50 feet in to a total depth of 1,375 feet.

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is found to dip considerably, and in Clinton Township, Seneca County, R. B. Kinney and others' No. 7 near the southeast corner of the Henry Bell farm, Section 32, pumped 50 bbls. flush. Top of Trenton found at 1,628 feet and went 317 feet in that formation, to a depth of 1,945 feet.

East of Toledo, in Jerusalem Township, Lucas County, the Ohio Oil Co.'s No. 17 well, 1,000 feet from the south line and 900 feet from the east line of the R. H. and M. A. Eck farm, Section 33, pumped 5 bbls. with top of Trenton at 1,326 and oil at 93 feet in, the total depth being 1,419 feet.

In Center Township, Mercer County, near Mendon, Mack P. Colt's No. 9 well, 1,075 feet from the north line and 350 feet from the east line of the W. M. Miller farm, Section 4, pumped 10 bbls. In Recovery Township, same county, A. W. Neely and others' fourth well, 1,350 feet from the south line and 960 from the west line of the J. H. Steckler farm, Section 25, pumped 18 bbls. Top of Trenton was at 1,128 feet and oil at 50 feet in. In the same township, J. Wilson and others' No. 1 on the J. Brunswick farm, in the northeast quarter of Section 24, pumped 2 bbls. Top of sand at 1,151 feet and drilled to a total depth of 1,197 feet.

In Jennings Township, Van Wert County, Boyd & Stelzer's No. 3 in the southwest corner of the Thomas E. Jones' farm, Section 31, pumped 5 bbls.

The wildcat well of Lee A. Watson in the northwest corner of the Harve Cramer farm in the northwest quarter of Section 17, Wayne Township, Darke County, struck salt water just as the sand was penetrated below the cap rock and the hole was abandoned as worthless.

In the new Cynthian Township, Shelby County Field, Slagel & Johnson's fourth well, 1,600 feet from the north line and 250 from west line of the Henry Danzig farm, Section 16, pumped 10 bbls. The Maul Oil Co.'s second test 1,920 feet from the south line and 660 from the east line of the Peter Geffena farm, Section 25, is a light gas well. The Ohio Oil Co.'s test 1,100 feet from the north line and 250 from the west line of the E. Engart farm, in the southwest quarter of Section 29, same township, is also a light gas well.

In Laramie Township, Shelby County, Leo A. Watson's wildcat on the southwest corner of the Joseph Mannin's farm, in the northwest quarter of Section 3, was a duster.

In the Payne Field, in Harrison Township, Paulding County, John A. Thompson and others, formerly reported as the Aetna Drilling Co.'s No. 4 well, in the southwest corner of the Thomas Lamb farm, in the southwest quarter of Section 32, pumped flush 25 bbls. at 1,457 feet.

Central Ohio

In the vicinity of Breeman, in Rush Creek Township, Fairfield County, the Ohio Fuel Gas Co.'s test on the southeast corner of the L. C. McCandlish farm, Section 8, is reported as a dry hole.

In Hardy Township, Holmes County, the Klise-Eckstein-McCann Co.'s test on the southwest corner of the A. M. Hudnut 10-acres, Section 10, is reported showing for 10 bbls. In Prairie Township, same county, the Pure Oil Co. has reported a fairly good gas well at a second test on the Hiram Marquis farm, Section 17. In Monroe Township, same county, the Ohio Fuel Gas Co., drilled in a nice gas well at No. 4 B. F. Uhl, 100 acres, Lot 15. The well is in the southwest corner of the lease.

Indiana

Some nice producers are reported from the old Trenton Rock area of eastern-central Indiana, and indicate that all the good territory has not been eliminated in the past. In the Montpelier area in Harrison Township, Blackford County, the Montpelier Development Co.'s test on the A. F. Guarard farm, Section 1, showed for 2 bbls.

In Bear Creek Township, Jay County, Mesel & Mesel's No. 5 on the D. W. Berg-

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man farm, Section 21, is reported at 50 bbls. flush. William Mesel is drilling No. 5 James Jeffries farm, same section. The National Supply Co. is drilling No. 15 T. W. Shimp farm, Section 28, same township, while H. L. Ogle and others' test on the Irvin Campbell farm, Section 5, pumped 5 bbls.

In Noble Township, Jay County, Rice and others' second test on the H. E. Anderson farm, Section 4, pumped 10 bbls., while No. 3 same farm, showed a flush of 40 bbls.

In Delaware Township, Delaware County, in the Muncie Field, Clark & Hawkins drilled a duster in No. 9 on the L. M. Coons farm, Section 16.

In the Princeton Field in Southwestern Indiana, J. H. Young and others second test on the southeast corner of the Thomas Compton farm, in the northeast quarter of Section 1, Union Township, Gibson County, is credited with 45 bbls. Top of sand at 1,487 feet and oil at 12 feet in. This was formerly reported as on the Tieman Brothers farm.

Illinois

Much interest is manifested in the findings of a new sand in the Martinsville and Casey Township fields of Clark County, Illinois, in the No. 8 well of the W. C. McBride, Inc., on the Nettie Baker farm, Section 30, Martinsville Township. Outside of a couple of wells that found the Trenton Rock productive at around 2,700 feet, and the shallow Casey sand at around 600 feet, most of the wells in Sections 30 and 31, Martinsville Township, have been getting their productive pay from the Carper sand, better known as the Stray sand found at close around 1,400 feet. The new sand in the field was found in No. 8 Baker farm, at a depth of 1,584 feet or more than 100 feet below the Carper or Stray sand and is really the Niagra sand. This well showed 55 bbls. from the Carper sand and 45 bbls. from the Niagara. This is really the first production noticed in the Niagara lime formation, that covers the surface of most of the old Trenton Rock fields of Ohio and Indiana. It will mean deeper drilling possibly of many of the wells drilled in the Carper or Stray sand during the past few years and then a still further production is possible in the Trenton Rock, some 1,200 feet deeper.

In the Second well drilled by Ellis, Myers and others on the A. W. Baker farm, in Section 36, Casey Township, Clark County, a 40-bbl. well was found in the Niagara lime at a depth of 1,587 feet or about 140 to 150 feet below the Stray sand found in that township. This new sand may rejuvenate the production in many parts of the old Illinois field. It is supposed to be the Niagara lime that Col. Hockstetter found his first prominent showing of oil near Oil Fields, in Parker Township, same county, back in about 1904, which meant the opening of the Illinois Field. The material used in this old-time well was pulled from old wells in the Irvine, Kentucky, Field and shipped to Illinois. Later a wonderful field was found in the vicinity of Irvine, Ky.

In the Dennison Township, Lawrence County, the Ohio Oil Co. is drilling No. 8 on the Edward Meagher farm, Section 5. In Petty Township, the Silurian Oil Co. is drilling No. 18 William Ross farm, Section 29.

Considerable new work the past few days has sprung up in the Allendale Field, of Wabash Township, Wabash County. The Adams Corner Oil Co. is drilling a test on the M. Madden farm, Section 7, Wabash Township, and about 2 miles east of Allendale. Raisley and others are at work on the S. J. Stilwell farm, Section 1. The Max Oil Co. is drilling Nos. 4 and 5 Holson-Derney farm, Section 18. The Wiedner Oil Co. is drilling No. 4 Holson-Derney farm, same section. Wirebaugh & Ballard have a rig in for a second test on the Clara E. Adams, Section 23, and Phipps and others a rig for a test on the B. Armstrong heirs farm, Section 13, a mile southeast of Allendale.

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Oil Securities Continue Downward

But With No Evidence of Hurried Liquidation in Seven Weeks' Decline. Sales in Small Lots With Moderate Fluctuations Either Way

By N. O. Fanning
Room 543, No. 30 Church St., New York

NEW YORK, Sept. 5—Oil stocks continued weak with sharp declines in Prairie Oil & Gas and Galena Signal Oil, the main features. Galena Signal Oil passed the dividend on common due at this time. International Petroleum forged ahead, selling above 26 against year's high of 28¾. Continental Oil was also strong and active.

Prairie Oil & Gas

Weakness in the stock of Prairie Oil & Gas was one of the features of oil securities trading during the week, a low price of 48⅝ being established. Selling of the stock was attributed to reports that the dividend would be cut at the forthcoming meeting.

In quarters usually not carried away by the numerous rumors going the rounds in the financial district, the strong financial position of the company was pointed out as refuting reports of any change in the dividend.

Prairie Oil & Gas Co. has been operating in the Mid-Continent fields more than 20 years. During the famous overproduction in Cushing in 1915 the company is said to have resorted to financing through private channels but has never gone to the public for funds through the many periods of depression the oil business has experienced. It is believed that new financing might be the only development of importance to be expected at the present time provided there is the necessity of carrying increased stocks of crude at low prices during the next few months.

Decline in Oils Gradual

The downward movement in oil securities has now continued since July 20. The Oil & Gas Journal's weekly average price of 20 representative oil stocks listed on the New York Stock Exchange was at 57.13 on that date. On August 31 it had fallen to 51.16, a drop of 5.97 points or more than 10 per cent.

During the period of approximately seven weeks during which oil stocks have been declining, no hurried liquidation has been evident. Rather, sales have been in small lots, with a decline of say 2 points, a rally of 1 point, another drop of 2 points and so on. Of course there have been some exceptions.

Because there has been no abrupt reaction in oils of a sensational nature the decline that has been going on has not been taken so seriously by the financial district, which believed that price reductions of the last few weeks are reflective only of temporary conditions. Presumably the small investor has not been inclined to take losses in oils, preferring to hold on in anticipation of an early recovery.

It generally takes a sharp and violent reaction to shake the confidence of the public in securities.

Mid-Continent Petroleum

Net income of the Mid-Continent Petroleum Corp. for July was in excess of $1,600,000 before depreciation and depletion, but after interest, abandoned wells, etc. This compares with a loss of $435,000 in July of last year, thus showing an increase of more than $2,000,000.

For the six months ended June 30, last, the company reported net income of $7,346,734 before depreciation and depletion but after interest and abandoned wells. For the seven months' earnings are almost equal to the total earnings for the whole year 1924.

Associated Oil

Sterling Oil & Development Co., a subsidiary of the Associated Oil Co., declared an extra dividend to 10 cents per share in addition to the regular semi-annual of 10 cents, both payable October 5 to stockholders of record September 25.

Associated Oil Co. declared the regular quarterly dividend of 50 cents, payable October 26 to stockholders of record September 30.

Regular Tide Water Dividend

The Tide Water Oil Co. has declared an initial dividend of 25 cents per share on the new no par value stock. This is equal to the regular quarterly of $1 paid on the old stock of $100 par value, which was split up 4 for 1. The dividend is payable September 30 to stockholders of record September 18.

Standard of New Jersey

Stocks of several subsidiaries of the Standard Oil Co. of New Jersey have given an unusually good account of themselves this year—better, it seems, than that of the parent company itself. Notably are Humble Oil & Refining and Imperial Oil, Ltd.

Now a new one is adding itself to the list of good performers—International Petroleum, Ltd., which is making such rapid strides in Colombia and Peru, South America from the crude production viewpoint. When the company's Colombian property has been provided with transportation, its crude production will be doubled from about 7,000,000 to 14,000,000 bbls. annually, or better. Work on pipe line transportation in Colombia is progressing and should be completed some time next year.

The company's volume of business should be increased 50 per cent when this takes place.

This should be reflected not only in stock of International Petroleum, Ltd., but also in Imperial Oil, Ltd., and Standard of New Jersey common.

Continental Oil

Continental Oil Co.'s expenditures for new bulk and retail service stations, refinery improvements, and so on, are understood to have exceeded $2,000,000 during the first half of 1925.

Sinclair Consolidated

Sinclair Consolidated Oil Corp. and subsidiaries report for six months ended June 30, 1925, gross earnings of $68,444,136 against $62,438,184 in first six months of 1924. After expenses, ordinary taxes, interest, etc., net profit available for Federal taxes and reserves was $10,260,486 comparing with $9,053,104 in same period of previous year.

Consolidated statement for six months ended June 30, 1925, compares as follows:

	1925	1924
Gross earnings	$68,444,136	$62,438,184
Exp, main, tax, etc..	54,436,555	50,561,564
Net earnings	$14,007,581	$11,876,620
Int, disc, etc	3,747,095	2,823,516
*Net profit	$10,260,486	$9,053,104

*Available for federal taxes, surplus and reserves.

NEW YORK STOCK EXCHANGE—LIST OF ACTIVE STOCKS

Stocks—	Par	‡Dividends Rate	Closing Quot. Sept. 5	Aug. 31	1925 High	1925 Low	1924 High	1924 Low	1923 High	1923 Low
American Republics	..	..	*55	*58	76	48	48	25	..	..
Associated Oil	25	8	33¾	36	40¼	32	34⅝	27⅝	29¼	29½
Atlantic Ref. com.	100	..	101	*100	117½	95⅛	140½	78½	100	98⅝
Barnsdall "A"	25	..	19½	20¼	30	18⅝	22½	14	37	9⅝
California Pet. com.	25	7	26⅝	26	32⅝	23⅝	29	19⅝	28¼	17½
General American Tank	..	†3	*47	*45½	58½	45	53	35½	71⅝	40
General Petroleum	25	8	45½	43¼	59	42	45	38⅝	..	..
Houston Oil	100	..	64	63½	85	59	82½	61	78	40⅜
Independent Oil & Gas	..	†1	24⅜	25	41⅜	13½	16¼	5⅜	11½	3⅝
Indian Refining	10	..	*7½	*7½	10⅝	5½	7	8⅝	8½	4
Louisiana Oil	10	..	14¼	14	23⅜	13⅜	..	..	..	..
Maracaibo	..	..	*20⅜	*21½	35½	21	37½	26⅝	28¼	16
Mariand	..	†3	42¼	41⅜	46⅞	32⅝	42	29	59⅝	18½
Mexican Seaboard	..	..	*12½	13	22⅛	11½	25⅜	14¼	19⅜	5⅜
Mid-Continent Pet.	..	..	28	27½	36	25⅜	40½	22⅝	62½	23⅜
National Supply	50	6	*56½	58⅜	71	56⅜	72½	54	68	54
Pacific Oil	50	†3	53⅞	42⅜	65¼	51⅜	58¼	45	52¼	31½
Pan-American com.	20	12	61⅝	61	83⅞	61	65	44¼	93½	53
Phillips Petroleum	..	†2	38¼	38¼	47¼	36¼	42¼	28½	65⅝	19⅜
Producers & Refiners	50	..	14⅜	13½	32⅝	13½	43½	29⅜	58¼	17½
Pure Oil com.	..	6	26	26¼	33⅜	25⅛	30¼	20	32	16¼
Royal Dutch N. Y. sh.	13.40	4.42½	*48⅝	49⅝	57⅞	48¼	59½	40⅝	66½	40½
Shell Transport	10	3.30	*40	*40⅝	45⅝	39¾	42	33	41¼	29⅛
Shell Union com.	..	†1.40	22½	22⅜	28⅝	25⅝	22½	15⅜	19¼	12⅜
Simms Petroleum	10	..	18⅝	19¼	26⅝	19½	24	10⅝	16⅝	6½
Sinclair Consolidated com.	..	..	19	18½	24⅜	17	27½	15	39⅝	16
Skelly Oil	25	..	26½	25	30½	21⅜	29	17⅛	35	12⅛
Standard of California	25	8	53⅝	53½	67½	51⅜	68⅛	55½	64⅜	47½
Standard of N. J. com.	25	4	39⅜	39⅜	47⅛	38⅝	42½	33	44⅛	30⅞
Superior Oil	6	..	*3¼	3¼	6½	2⅜	8⅛	2⅝	6⅜	2
The Texas Co.	25	12	47¼	47⅛	54⅝	42⅜	45⅝	37⅜	52⅞	34⅝
Texas Pacific Coal & Oil	10	..	11⅛	11⅛	23⅝	11	15¼	8⅛	24⅜	5½
Tide Water Oil (new)	..	4	*31⅜	31⅛	‡152	122	151	116½	144	94
Transcontinental	..	..	4	3⅞	5⅞	3⅞	6¼	3⅜	14¼	1¼
Union Oil of California	25	7.2	33¾	33⅞	43⅝	33¼	39	35½	..	..
Union Tank com.	100	5	*118½	119⅜	134	118½	132⅞	94	114	106
White Eagle Oil & Ref.	..	2½	25⅞	25½	31⅜	25⅝	29⅝	23¼	30⅝	29½
Standard Oil Stocks										
Anglo-American Oil	£1	25	*22⅛	*22½	26⅜	18	18⅜	14⅝	19⅜	13½
Borne Scrymser	100	12	*220	*220	240	212	264	150	153	110
Buckeye Pipe Line	50	14	56½	57	72	58½	85½	51	94	57½
Chesebrough Mfg. Co.	25	14	*62½	*64	70	48¼	52½	29½	340	205
Crescent Pipe Line	25	..	*16	*16½	17	10	20	11¼	25	15
Cumberland Pipe Line	100	12	*144	*147	156	128	148	108	117	80
Eureka Pipe Line	100	8	*70	70	96	70	105	74	117½	87
Galena Signal com.	100	..	40	45¼	68½	40	69⅜	52½	78	55
Humble Oil & Refining	25	4.8	57¼	56⅜	72⅛	42½	43⅜	36	41	28¼
Illinois Pipe Line	100	12	134⅝	*134	154½	127	161	123	171	115
Imperial Oil (Ltd.)	..	†3	31¼	36½	32½	27¼	119	99	123	92
Indiana Pipe Line	50	3	*67	*68	84	66⅝	110	66	103	81
International Pet. Co.	10	x50	25⅝	24¼	28⅜	22¼	24⅜	16⅞	24⅜	13¼
Magnolia Pet. Co.	100	4.5	*136	139	159	130½	162	125	166	123
National Transit	12.50	16	*20	*20½	25½	19½	25⅞	20⅝	29	19½
New York Transit	100	8	*56	*56	79	50	97	54½	138	70
Northern Pipe Line	100	6	*80	80	88	78	107½	72	111	96
Ohio Oil Co.	25	8	*61	63	75¼	60	79⅛	53	85⅝	48¾
Penn-Mex. Fuel	26	..	*21	*23	44	23	35⅝	27	45	10½
Prairie Oil & Gas	25	†2	49½	53⅝	65½	48⅝	269	193	272	152
Prairie Pipe Line	100	8	121½	122	127½	106	111	100	117	93
Solar Refining Co.	100	15	*205	*205	259	200	240	170	212	161
South Penn Oil	100	..	154	152½	197	129	176	117	196	100
South West Pa. Pipe	100	6	*60	*60	84	60	89	68	89	66
Southern Pipe Line	100	4	*76	*76	103	75½	100	80½	116	87
Standard of Indiana	25	10	61⅝	61⅛	70	59⅛	69⅜	54⅛	69⅜	48½
Standard of Kansas	25	..	31½	31⅜	46	30¼	50½	32½	56⅛	36½
Standard of Kentucky	25	16	125	125	126	114⅜	121⅞	101	109½	76
Standard of Nebraska	100	20	*233	*234	270	231	262	198	280	186
Standard of New York	25	5.6	40⅞	40½	48⅝	40	48	37⅜	49⅜	35½
Standard of Ohio, com.	100	10	*350	*350	369	338	337½	277	320	270
Swan & Finch com.	25	..	*14	13⅜	27	14½	28	20	..	..
Vacuum Oil	25	†3.75	85	86	96⅛	80½	83½	50½	55½	40
Washington Oil	10	..	*30	*30	30½	30	29	25	28	20¼
Miscellaneous Stocks										
Continental	10	10	26¼	23½	31¼	21⅜	..	..	..	..
Gulf Oil Corp. of Pa.	25	6	74⅝	73⅛	79	63½	67⅜	56	68½	45⅜

*Bid, no sales. †In dollars. §The figures in this column are kept up to date as far as possible, but are not guaranteed. xCents per share. ‡Old stocks.

The Oil and Gas Journal's weekly average price of 20 representative petroleum stocks listed on the New York Stock Exchange was as follows:

Sept. 5	51.18	Aug. 3	54.51	June 29	56.36
Aug. 31	51.16	July 27	56.21	June 22	57.29
Aug. 24	52.06	July 20	57.13	June 15	58.51
Aug. 17	51.25	July 13	55.98	June 8	56.37
Aug. 10	52.78	July 6	55.96	June 1	55.65

NORTH TEXAS MARKET SHOWS MORE WEAKNESS

FORT WORTH, Tex., Sept. 7.—The North Texas market has shown a further weakness during the week, in some particular lines, though there is considerable strength in some products.

The gasoline market, with the exception of natural gasoline, is extremely weak and refiners and marketers are frank in expressing their fears that the next 10 days will see still lower prices. Some believe there will be further cuts in crude and further tank wagon reductions at an early date.

Motor oil late in the week was being quoted at 8⅛ to 8¼ cents, while 56-58, 450 end point gasoline was quoted at 10¾ cents and 64-66, 375 end point stock was going at 10 cents. There was no movement of export gasoline reported and the market was said to be fully 1 cent lower than a week ago when some of the exporters bought, but only sparingly.

The natural gasoline market is showing unusual strength, especially in view of the weakness of motor oil. There is a big movement in natural gasoline. It is said considerably more of this product has been sold than is available at this time. All grades are quoted at 11 cents.

The kerosene market is maintaining fair strength. The 41-43 water white grade is going at 4¼ to 4½ cents. There is very little of the prime white grade being made.

The fuel oil market is unusually strong in view of the weakness of other products. Gas oil is not particularly strong but there is a fairly good movement of gas oil at 3 cents. Fuel oil is quoted at $1.10 to $1.15 per barrel and there is a good demand.

JUNIOR TECHNOLOGIST TEST

The United States Civil Service Commission announces that receipt of applications for junior technologist will close October 10. The date for assembling of competitors will be stated on the admission cards sent applicants.

REFINING AND MARKETING

NATIONAL PETROLEUM ASSOCIATION PREPARES ATLANTIC CITY PROGRAM

Discussion of departmental activities covering all activities of the refiner will feature the annual meeting of the National Petroleum Association to be held at Atlantic City, September 16, 17 and 18. Trustees in charge of the several departments will make reports and the meetings will then be thrown open for general discussion.

In adition there will be several formal addresses by well known authorities on subjects of special interest to refiners. The annual election of officers will take place on the last day. Following is the program announced by the committee in charge:

Board of Trustees Meeting

The board of trustees will meet in the room of President Kenney, Hotel Traymore, at 10 a. m. (daylight saving time), Wednesday, September 16.

Wednesday Afternoon, September 16

2 p. m. (daylight saving time.)

Call to order: O. P. Keeney, president.

Reading of minutes: Herbert G. Eaton, recording secretary.

Appointment of nominating committee.

Report of general counsel: C. D. Chamberlin.

Report of treasurer: G. B. Hunter.

General subject: Traffic and Transportation.

Report of the department of traffic and transportation. Frank B. Fretter, trustee in charge.

Report of Traffic Attorney, Willis Crane.

Discussion. General subject: Welfare and Insurance. Report of the department of welfare and insurance, R. A. Wotowitch, trustee in charge.

Address: "Organizing N. P. A. Fire Marshals," F. A. Epps, representative of the National Petroleum Association on the Committee on Flammable Liquids, National Fire Protection Association.

Remarks: Houston Dunn, secretary, National Petroleum Mutual Fire Insurance Co.

Discussion.

Wednesday Evening, September 16

8:15 p. m. (daylight saving time.)

Theater party: H. A. Wotowitch, in charge.

Thursday Morning, September 17

9:30 a. m. (daylight saving time.)

Report of nominating committee, election of officers and trustees.

Vote on proposal to increase the number of trustees from nine to twelve.

General subject: Manufacture.

Address: "Application of Science to Petroleum Refining." J. F. Oakleaf, head of the department of planning and research, Vacuum Oil Co., Paulsboro, N. J.

Discussion.

Report of the department of manufacture. B. B. Stroud, trustee in charge.

General subject: Accounting and Statistics.

Report of the department of economies, accounting and statistics. P. S. Tarbox, trustee in charge.

General subject: Standard and Tests.

Report of the department of standards and tests, E. C. Gardner, trustee in charge.

Board of trustees meeting: The newly elected board of trustees will meet at lunch at the Hotel Traymore, Thursday, September 17, at 1 p. m. (daylight saving time.)

Thursday Afternoon

2 p. m. (daylight saving time.)

Golf tournament at Sea View Golf Club. G. G. Woodruff in charge.

Thursday Evening

7 p. m. (daylight saving time.)

Fellowship dinner, Hotel Traymore. C. H. Longshore in charge. Fred G. Clark in charge of entertainment.

Friday Morning, September 18

9:30 a. m. (daylight saving time.)

General subject: Trade and commerce.

Address: "Marketing Problems of the Refiners," Warren C. Platt.

Report of department of trade and commerce. L. P. Litzinger, trustee in charge.

Address: "Economic Law Breaking in the Petroleum Refining Industry," Dr. J. E. Pogue, author of "Economies of Petroleum."

Discussion.

General subject: Legislation and Litigation.

Report of the department of legislation and litigation. Sheldon Clark, trustee in charge.

General subject: Membership and Relations.

Report of the department of membership and relations. Fred G. Clark, trustee in charge.

"The National Petroleum Association."

Discussion by the members.

Remarks: Fayette B. Dow.

EVANSVILLE MARKETER SELLS TO MARLAND CO.

EVANSVILLE, Ind., Sept. 7.—Sale of the Evansville Oil & Grease Co. to the Marland Refining Co. of Ponca City, Okla., was announced during the past week. Frank C. Enz, president and general manager of the Evansville Oil & Grease Co., is a director of the National Petroleum Marketers Association and a

Frank C. Enz

former president of the Indiana Independent Petroleum Marketers Association. The Evansville Oil & Grease Co. is one of the leading independent marketing firms in Indiana, having 7 bulk and 12 filling stations in this State and western Kentucky.

Mr. Enz will continue in charge of the properties of the Evansville Oil & Grease Co., acting under the supervision of Harry Kennedy, manager of the northern division of the retail marketing department of the Marland Refining Co.

BRISTOW REFINERY ADDITION

The Transcontinental Refining Co. now has in operation three additional units of the Slagter cracking units at their Bristow, Okla., refinery. A fourth unit will be ready for operation in the near future. Six units have been operated at the refinery for some time.

COMPOUNDING PLANT IS TO BE ENLARGED

TOLEDO, Ohio, Sept. 7.—Toledo's importance as a compounding center was greatly increased when announcement was made that the Fiske Brothers Refining Co., had let the contract to the Watts & Suhrbier Co., for an addition to its present plant which will double its capacity. The new addition, which will be three stories will be devoted exclusively to the manufacture of gasses and lubricants and will double the staff of workers. The Fiske Brothers Co., which has been in operation in the East for more than a half century, has been in Toledo for the past 10 years.

The new building will be of brick and concrete construction and fireproof. Work will begin immediately.

NEW CONSERVATION OFFICERS

OKLAHOMA CITY, Okla., Sept. 5.—William J. Armstrong of Oklahoma City has been installed as director of the oil and gas conservation bureau of the Corporation Commission, succeeding W. C. Geers. Armstrong, a graduate of the University of Oklahoma, has been in the oil business for several years. He is a brother of former Justice James Armstrong of the Criminal Court of Appeals. J. L. Kendall, oil operator, of Oklahoma City, has been installed as conservation enforcement officer in the Blackwell district, succeeding J. L. Amis.

TAKES OVER MINERVA PLANT

FORT WORTH, Tex., Sept. 7.—The Kent-Middleton refining interests of Corsicana, Tex., have taken over the plant of the Owens Refining Co. at Minerva, Milam County, and are in direct charge of operations of the plant. The Owens refinery has a daily capacity of 1,000 bbls. of crude and is supplied almost entirely from the shallow production in Milam County, or what is known as the Rockdale-Minerva territory.

NEW EXPORT COMPANY FORMED AT BALTIMORE

BALTIMORE, Md., Sept. 7.—The Island Petroleum Co. has organized the Island Export Co. to carry on and expand its export oil business. William Werckentheim, who has been export manager of the Island Petroleum Co. for 10 years, is president of the new company. William Keyser is secretary and assistant treasurer, and F. W. Florenz, treasurer.

For a number of years the Island Petroleum Co. has been one of the largest independent exporters of oil products from the Port of Baltimore. Shipments include not only Europe and South America, but also Australia and the Far East.

DENIES VACUUM SUIT

WASHINGTON, D. C., Sept. 7.—Petitions of the Vacuum Oil Co. for a temporary injunction to restrain the Penn Oil Co. from the alleged substitution of its own oil for Vacuum Oil Co.'s products was denied by Chief Justice McCoy of the District of Columbia Supreme Court. The defendant company in an answer to the suit denied all allegations in the bill of complaint. The Vacuum charged the Penn company had substituted its own oils when customers asked for "Mobiloil," manufactured by the plaintiff.

RECEIVERSHIP SOUGHT

KANSAS CITY, Mo., Sept. 7.—Appointment of a receiver for the Kansas City assets of the Black Petroleum Co., the North American Oil Co. and the National Oil Co. is asked in a suit filed by the Fidelity and Deposit Co. of Maryland in circuit court here. The petition asks that C. J. Webster and A. P. Siegel of Kansas City, and directors and officers in the three oil companies be restrained enjoined from selling or transferring any of their assets while the suit pends. Collection of an Oklahoma court judgment for $9,665 is asked.

EXAMINER PROPOSES IMPORTANT CHANGES IN MID-CONTINENT RATES

Disapproval of the request of the defendant carriers and certain complainants that oil rate groups in the Mid-Continent be changed, the establishment of rates which would generally increase the present differentials of Groups 1 and 2 under other groups south of the Kansas line to destinations in western trunk line territory, Illinois, Indiana and the northern peninsula of Michigan, and the establishment of an 80 per cent maximum rate on fuel oil and other low grade products, based on the gasoline rate, were the features of a report made by Examiner Charles R. Seal to the Interstate Commerce Commission during the past week in the rate case involving most of the refiners of the Southwest.

At this writing most of the traffic managers of the companies affected had not received the complete report of the examiner, and for that reason had not formulated an opinion regarding all his recommendations. Among those who had had the opportunity to consider the examiner's proposals and who were in those sections where higher rates are proposed, it was apparent that opposition would develop before the proposals are finally acted upon by the Interstate Commerce Commission several months in the future.

In this case there are four main complainants with numerous interveners involving organizations in the points of destination as well as origin. The case first attracted attention of the southwestern refiners early last year when the Sinclair Refining Co. and other refiners in the Kansas City (Group 1) area filed a complaint asking that rates be reduced to certain points in western trunk line territory. Similar action was immediately taken by the Kansas (Group 2) refiners.

These complainants alleged that they were entitled to greater differentials under Oklahoma (Group 3) than are now in effect. These two complaints are known as Dockets 15584 and 15585.

Later Dockets 16065 and 16066 were filed by a group of refiners in northeastern Oklahoma and by the North Texas Traffic Bureau, composed of refiners in the North Texas area. In the main these complainants sought to prevent any change in the present differentials existing between Groups 1 and 2 and their groups, and at the same time sought a regrouping of the points of origin in Oklahoma and Texas, with important changes to be made in rate differentials. Other groups of refiners were represented, so that before the hearings which consumed about a month's time were completed the entire rate structure on petroleum products in the Southwest was involved.

The defendant carriers also asked for a regrouping of the points of origin and the same time sought higher rates. As previously stated, all requests for re-

(Continued on Page 151)

Brief Items for Plant Operators

Explains Principle in Stabilization of Natural Gasoline

The filing of the Carbide and Chemicals Corp. suit against the Phillips Petroleum Co. in the Federal District Court of Delaware involving the validity of patent rights on the stabilizing process, explained in detail in the September 3 issue of The Oil and Gas Journal, has brought considerable speculation in natural gasoline circles as to the issues involved. The following explanation has been offered by one authority who has been connected with the manufacture of natural gasoline for several years:

"The tendency of a liquid to evaporate is measured by its vapor pressure. Given a mixture of liquids mutually soluble in all proportions in each other, it has been shown that the part of the total vapor pressure of the mixture contributed by each component is proportional to the percentage of that compound present in the mixture.

"The approximate vapor pressures of a few of the paraffin hydrocarbons follow:

Propane at 100 Fahrenheit, 179 lbs. per square inch absolute or 164 lbs. gauge.

Iso-Butane at 100 Fahrenheit, 79 lbs. per square inch absolute or 64 lbs. gauge.

Butane at 100 Fahrenheit, 47 lbs. per square inch absolute or 32 lbs. gauge.

Iso-Pentane at 100 Fahrenheit, 21 lbs. per square inch absolute or 6 lbs. gauge.

Pentane at 100 Fahrenheit, 16 lbs. per square inch absolute or 1 lb. gauge.

"From this table it is evident that the vapor pressure of natural gasoline is due almost entirely to substances more volatile than pentane. For a natural gasoline having a vapor pressure of 25 lbs. at 100 degrees Fahrenheit and containing 5 per cent of propane that part of the vapor pressure of the gasoline contributed by the propane would be approximately 5 per cent of 179 lbs. (see table) or 9 lbs.

"The remainder of the vapor pressure of the gasoline, namely 16 lbs. 25 lbs.—9 lbs.) would be due to that contributed by the other constituents. If the propane and butane were present in natural gasoline in the same proportion then that part of the total vapor pressure of the gasoline contributed by the propane would be about 3.8 times $\frac{(179)}{47}$ as great as that contributed by the equal amount of butane.

"Therefore for each unit of propane removed from the gasoline, a quantity of butane about 3.8 times as great can be added to obtain gasoline of the same vapor pressure. Likewise, the removal of a quantity of iso-butane permits including 1.7 times $\frac{(79)}{47}$ that quantity of normal butane.

"A consideration of the vapor pressure of butane which is 32 pounds, gauge at 100 degrees Fahrenheit, shows that natural gasoline could not be composed entirely of that constituent.

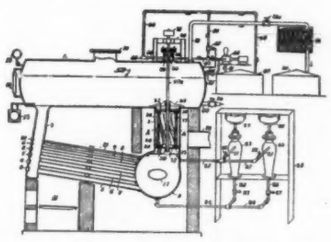
"It is therefore obvious that if normal butane is present in the gas in sufficient proportion it should be the most volatile component present in the gasoline. The law governing the vapor pressure of mixtures of volatile liquids was first discovered by Henry in 1803 and later given in a more definite form by Raoult in 1887. Both the absorption process for recovering gasoline and the rectification or stabilization process therefore are based on sound scientific principles."

R. M. COYLE TO NEW POST

R. M. Coyle, of Ranger, Texas, assistant general superintendent for the Chestnut-Smith Corp., has resigned effective September 1, to accept a position as chief engineer for the McGuire interests, of which the Boudinot Gasoline Co., of Frankell, Texas, and the Newton Engineering Co., are representatives in the Mid-Continent. His headuarters will be Breckenridge, Texas. The McGuire interests have their headquarters at Denver, Colo.

Recent Patents

1,550,115.—Method of Obtaining Gasoline and Other Low-Boiling-Point Distillates from Heavier Hydrocarbons. Arthur D. Smith, Arkansas City, Kans. Filed April 17, 1920. Serial No. 374,571. Five claims. (Cl. 196-47.)



The process of treating heavy hydrocarbons which consists in cracking the same, filtering the remaining liquid to remove the larger particles of free carbon, then subjecting said liuid to centrifugal action to eliminate a portion of its colloidal carbon, and then returning said liquid to the cracking zone.

1,550,568.—Process for Treating Hydrocarbon Oils. Robert T. Pollock, Boston, Mass., assignor to Universal Oil Products Co., Chicago, Ill., a corporation of South Dakota. Original application filed May 12, 1920. Serial No. 380,745. Divided and this appli-

(Continued on Page 151)

SUIT TO RESTRAIN USE OF REFINING PROCESS

HOUSTON, Tex., Sept. 7.—Suit has been filed in the Federal Court here by The Texas Co. against the Gulf Refining Co. in which the plaintiff seeks to have the Gulf Co. restrained from using a process for cracking gasoline out of heavy gravity crudes. The Texas Co. recites in its petition that the process was worked out by George W. Gray and Almer M. McAfee, petroleum chemists in its employ. Both were under contract to assign any new processes in refining crude oil they might perfect to the company.

It is set forth that Mr. Gray secured patent rights, which were later transferred to McAfee, who in 1922 assigned his patent rights to the Gulf Refining Co., which corporation has been using the process since.

The Texas Co. claims the rights belong to it in view of its contracts with Gray and McAfee and asks the court to restrain the Gulf Refining Co. from further use of it, and also that The Texas Co. be reimbursed for any profits accruing from the use of the process.

The Texas Co. asks for $1,000,000 damages in addition.

The first patent was issued to Gray in 1916. It was assigned to The Texas Co. McAfee set up the contention he was entitled to the patent rights on the process and brought suit against Gray. The Court of Appeals for the District of Columbia upheld McAfee's contention, and the patent office issued McAfee another patent covering the process, which he assigned to the Gulf Refining Co. in 1922.

The Texas Co. disputes McAfee's rights, asserting he was in its employ at the time, disobeyed the company's instructions experimented at its expense and with its facilities, hence had no right to assign his process to the Gulf Co.

The suit attracts much attention because of the prominence of the companies involved in the industry, the increasing production of low gravity crudes and the part they play in refining plants, and the right of any employe to retain or dispose of any new process he may develop or improvements he may make, while working for a corporation.

Oppose Government's Tentative Changes In Specifications

Opposition to the proposed changes in gasoline specifications adopted tentatively by the Technical Committee on Lubricants and Liquid Fuels of the Federal Specifications Board has been developing rapidly during the past week. These changes which were explained in detail in the September 3 issue of The Oil and Gas Journal provide for the dropping of the initial and end points in U. S. Motor gasoline specifications.

Plant operators who were either members of Committee D-2 of the American Society for Testing Materials or the Advisory Committee of the American Petroleum Institute state that their recommendations to the Federal Board have been entirely ignored. They take the position that the dropping of the initial of 131 degrees Fahrenheit and the end point of 37 degrees Fahrenheit is of no aid in the solution of gravity specifications for motor fuel.

As was explained in last week's issue the committees previously mentioned, representing the leading petroleum technologists of the refining industry, have been mainly concerned in securing changes either in temperatures or control points made necessary when the cotton was removed from the thermometer used in making distillation tests. To compensate for this change it was claimed that either the temperatures should be raised or the recovery points reduced.

Committee D-2 finally definitely recommended that the control points be reduced to two and these were to provide for 17 per cent over at 221 Fahrenheit and 89 per cent over at 392 instead of 20 and 90 per cent recoveries required at the present time. Authorities generally agreed that this would have given all the control necessary to assure quality motor fuel and at the same time would have made possible an increase of approximately 1 per cent in the gasoline recovery from crude for the entire country. It is expected that the Government's tentative action will come up for discussion at the next meeting of Committee D-2 to be held in Tulsa October 5.

N. P. M. A. EMPLOYS REFINERY INVESTIGATOR

CHICAGO, Ill., Sept. 7.—The National Petroleum Marketers Association has retained the Power Specialty Co. of New York to make a complete investigation to determine the feasibility of erecting several modern oil refineries at suitable locations in the Middle West to supply the requirements of the association's members.

This investigation will be made by the "refinery division" of the Power Specialty Co., under the direct supervision of Harry M. Hope, with Charles H. Edmonds acting as his principal assistant.

AMONG THE TECHNICAL MEN

Few among the plant operators have had a more varied experience than W. M. Fraser, superintendent of the Bristow, Okla., refinery of the Transcontinental Refining Co. After he had graduated from Oberlin College, at Oberlin, Ohio, and had taken special work at Case School of Applied Science at Cleveland, Ohio, Mr. Fraser entered the employ of the Sun Oil Co. at its Toledo, Ohio, refinery. Later he was chief chemist for the company at its Marcus Hook, Pa., refinery.

W. M. Fraser

In 1909, he became chief chemist at the Port Nechez, Texas, refinery of The Texas Co. and later was superintendent of the same refinery. For this company he also served as general superintendent of terminals with headquarters in New York.

He entered the employ of the Barber Asphalt Co. and was employed as superintendent of its Perth Amboy, N. J., asphalt plant for seven years. It is due to this long experience that Mr. Fraser is one of the best known authorities on the manufacture of asphalt. One of his patents issued at that time is now used extensively by the Barber company.

Mr. Fraser resigned his connection with the Barber company in 1919 to accept the position of European technical manager of the Swiftsure Oil Transport Co. He continued with this company for three years, maintaining headquarters in Paris. He returned to this country and shortly afterwards entered the employ of the Transcontinental company, taking charge of their Bristow refinery while it was in the process of construction.

In addition to the patent previously mentioned, Mr. Fraser has been issued several other patents concerned with refinery processes and equipment.

Unsheared Sheep and Suits of Clothes Are Two Different Things

The last time you were at the tailor's buying a suit, did the tailor take up a handful of the material and say sincerely that it was "all wool"?

He could take a handfull of fleece just sheared from the lamb and say the same thing, yet the two look nothing alike.

Before you can see this wool in suiting form it must be woven—dyed—and shrunk. To do this great knitting mills are kept busy all year long.

In somewhat the same way oil refineries are kept busy all year long.

While it is true that the gasoline you use in your car comes up from the oil well, it is not ready for use until it has left the refineries.

Following this transformation of the raw materials, there comes the problems of economically distributing the wool suiting and the gasoline.

It is this unromantic yet important task that the jobber does.

Obviously a manufacturer—a knitting mill—or an oil refiner must concentrate his energy on making his product useable. To do this profitably it is generally necessary for him to go into volume production.

Consider than the wholesaler's need of having immediate buyers. In addition remember that to sell comparatively small orders to all the retailers in all parts of the country would necessitate an expensive and complicated shipping department.

Yet the dealer needs the wares of this wholesaler along with the wares of many other wholesalers. He is better able to serve his business if he can have one central source of supply—the jobber.

Hence it is that the jobbers act as consistent volume buyers for wholesalers and reliable warehouses for the retailers.

In the oil business there is the Acme Petroleum Company. There are storage tanks in which we store various kinds and grades of oils. We have our own tank cars which make it possible to more efficiently fill orders.

This service is profitable, both to the refineries and the retailers. For the railroads and manufacturers who use quantities of oils, this service is economical. Phone us or write us today for further particulars.

(This is the thirty-sixth of informatory advertisements on the distribution problems with which the oil industry has to contend.)

ACME

Petroleum Company

Executive Offices: 624 S. Michigan Ave., Chicago

KANSAS CITY, MO. Land Bank Bldg

DALLAS, TEXAS Magnolia Bldg.

OIL STORAGE PLANTS

Over 7,000,000 Gallons Storage

West Tulsa, Okla. Riverdale, Ill.

(Chicago Switching District)

CHICAGO PRICE CUTTING CONTINUES; KEROSENE STRONG AND IN DEMAND

By J. B. Waldo

CHICAGO, Sept. 5.—The intense heat during the past 10 days has stimulated the consumption of gasoline very greatly. Early reports for August show that that month made important gains in gasoline consumption over July and the present indications are that the first week in September has recorded an increase in gallonage over the corresponding week in August throughout the territory. The condition of jobbers' stock is less certain. The many orders received for single and a few cars, all for rush shipment, indicates stocks of some jobbers are low but most of these cars were ordered by smaller jobbers. On the other hand many important distributors state they have supplies sufficient for some time, a week or even in some cases two weeks. Many of these bought liberally when the prices had receded to around 9½ cents. Others placed considerable orders when the tank wagon price was reduced 2 cents on August 25. Not sufficient importance has been attached to the stocks held by jobbers and all who buy to sell again such as the garages. There are thousands of these and in the larger towns and cities some of them do a very large gasoline business and taken as a whole the quantity of gasoline carried in stock by dealers must be very considerable. An automobile trade list gave the total number of garages in the territory of the Standard Oil Co. of Indiana as of September 1, 1923 as 14,500 garages. It has been greatly increased during the last two years but if there are but 15,000 garages in the territory and each averages but 100 gallons of gasoline in stock, this means that between the refiner and the ultimate consumer there is something like 200 cars of gasoline in small dealers tanks at a very low estimate. It is easy to estimate the stock of gasoline at the refineries. Any refiner can tell how much gasoline he has in store but the question is how much is there to be used or that can be used before there is any actual scarcity that would affect the general consumers? Jobbers' stocks are often considerable and to these must be added the gasoline in transit averaging at any time several thousand cars. All of this may act as a sort of a buffer which may be drawn on between the refiner and the consumer and at times it undoubtedly prevents an accurate sizing up of the stocks on hand. There must be something of the sort or how else is it possible to account for the limited demand on the refineries when the consumption is at its peak? When discussing this subject with a refiner last week it was stated that gasoline shipped last December to a large distributor had not been drawn on for actual consumption up to the first part of March.

After Holiday Demand

The demand in this market has been fairly active until the last two days of the week when the purchases for the Labor Day holiday had been practically completed. Any present demand is either for future delivery and there is but little purchasing on that account or for cars in transit that can be diverted to reach the buyer almost over night. There is considerable belief in refinery quarters there will be more active buying right after Labor Day and that this will lead to a stronger market. On the other hand it is pointed out that in spite of the large consumption which is much ahead of last year, stocks of gasoline are being reduced much less rapidly than last year at this time. Evidently the production is greater and it is likely to prove harmfully large. It is not well to depend on a continuance of the consumption at the present rate of increase during the rest of the year. Even if the consumption should maintain the rate of increase over last year that has been established, still there is an inevitable decline during the months after August. As was pointed out in the last issue of the "Lamp," the official organ of the Standard Oil Co. of New Jersey, stocks have not been substantially reduced during the period of peak consumption. With such thoughts as those in the minds of the best informed in the trade, it is doubtful if any buying on a continued large scale will follow even a very important consumption of gasoline over Labor Day. As usual this is a three days' holiday for a great number of people and there will certainly be a continuance of the hand-to-mouth plan of purchasing just so long as the price cutting continues in the various districts either of crude or tank wagon prices.

Prices Fraction Lower

The local demand still continues to be centered on the 56-58 and the 58-60 gravities. Some sellers report a preponderance of demand for one and others for the other. But all agree there is little active demand in the spot market for the higher tests and it is assumed that with the continuance of the heated weather there will be little of this demand. Prices on all grades have held their own better than some of the marketers anticipated and are but a fraction lower than at the close of last week. There were considerable offerings by some of the largest companies at what represented declines of one fourth cent during the middle of the week but towards the close there was an attempt on the part of several of these companies to get their prices back to where they were before they began apparently to cut each others prices. The market is today a one-priced market, there being little exception to the quotation of 8 cents for the 56-58—450 gravity and 8½ cents for the 58-60—437 gravity. Natural gasoline has sold fairly well, no rushing demand but rather light offerings here and prices have ruled at 11 to 11¼ cents.

Kerosene Strong

Kerosene continues to be the strong member of the petroleum family. There is a good, healthy demand and offerings are light. The demand seems general and includes more than the common percentage of the 42-44 gravity. This is hard to buy for early shipment. Although reports indicate some accumulations of kerosene it is evidently not available right now to the buyers in this market for immediate delivery. Several companies are now asking 5¼ cents for the higher gravity and little, if any, of the lower gravity is to be had at less than 4⅝ cents. The decrease in tank wagon prices has stimulated buying apparently and has forced prices to advance. It is noteworthy that at Wichita, Kans., as a result of the price war the tank wagon price of kerosene and gasoline at Standard stations is the same. At competing stations the gasoline prices is 10 cents which is 0.8 cents below the Standard's tank wagon price for kerosene. This only goes to show the silliness of many of the price cutting episodes in the territory.

Furnace Oils Steady

Furnace oils are steady for distillates and the demand continues rather good. Jobbers are continuing to fill their tanks but this demand is slackening a little as many of the larger dealers have supplied their early necessities while others have stocks that will run them well into the season. Of course there is a large quantity of furnace oil contracted for to be delivered by refiners in regular monthly deliveries or as required and in this connection it is noteworthy that some jobbers who turned down opportunities to cover their requirements earlier in the year at 3¼ cents to 3½ cents have since made contracts at 4 cents. There are still a good many jobbers who are oblivious to the possibilities for business in the supplying of fuels for oil burners in the homes. There are oil men who even go so far as to call them in their

talk among each other, "crazy contraptions." This seems foolish. When large companies that have made a great success of their business enter the oil burner field, there is at least something worth considering for the man that supplies the fuel on which they operate and which these devices must have just as an auto must have its motor fuels. It may be remembered that some oil men who were accustomed to selling barrels of kerosene to the grocery trade and an occasional package of lubricating oils seemed to resent the growth of the gasoline demand and did all they could to dodge it, some of them very successfully. These are out of business now and such as are alive may regret their lost opportunities. The present situation as to oil burners may not be all that is to be desired but there are great opportunities now and these are certain to improve.

Gas Oil Unchanged

Gas oil continues quiet and practically unchanged with quotations of a little better than 3 cents to the trade the ruling figure. Consumers and distributors are alike pretty much out of the market, some have stock sufficient for their needs, some have contracts but the majority seem indifferent. It is believed there will be more inquiries after Labor Day and that even if the demand does not show immediate gains there will be more inquiry from a wish to keep more closely in touch with the market situation on account of the coal strike. Jobbers who wish to store the oil are asking for low cold tests and this is quoted at 3¼ cents as a rule. The market is easy in tone.

Fuel Oil Dull

Fuel oil is dull so far as demand is concerned. The price situation is strong and buyers are keeping more closely in touch with the market apparently because of the coal strike. Refiners are holding their prices firmly and the level of refinery costs here is somewhat higher than last week. Offerings are not free and any bargain prices are due to some undesirable nature of the product offered. There are few if any quotations made by dealers lower than $1.05 and some will not talk a lower price than $1.10 per barrel fo reither 20-24 or 24-26 gravity refinery fuel oil. At the same time buyers believe the storage tanks at the refineries are gradually filling and that if there is no improvement in the demand there will be better offerings in two weeks as the result of storage accumulations. It is a period of waiting for developments. Smackover is more freely but less cheaply offered and the price is on a parallel with the refinery product.

Lubs Lower

Lubricating oils are gradually working to somewhat lower levels of price, some of the refiners having reduced bright stocks and other neutrals. There is a great deal of talking regarding prices, and probably some price cutting. As a matter of fact competition is keen and most sellers are simply trying to get the best prices they can and not lose the business. The demand continues good from the jobbers, fair to poor from industrial users and with little change for export.

Price Cutting Grows

The price cutting fever came later this year but it is growing in intensity and promises unless checked soon to equal last year's epidemic. To meet local competition the Standard Oil Co. is reducing prices at probably 50 places in its territory each day and it is noticable that the company is, if anything, more prompt to meet price changes this year than previously. Some dealers question the stability of the present price arrangement. It has been suggested that a correction of the condition might be secured by naming three prices, one to the public at the service stations, one to the dealer and a third the delivered price by tank wagon which they claim should be the highest of all. Another suggestion is that there should be but one published price and that this should be the tank wagon price. Then the quantity discount the station for the oil or gasoline should be charged a lesser price than the tank wagon price. Then the quantity discount should be applied to purchases by those who buy to sell again. These suggestions show at least that thinking men in the distribution end of the industry are seeking some price arrangement that will insure a greater stability and also that there is a feeling that the burden of expense is not at present equitably divided.

Today there are many filling stations in this city selling gasoline to the public at the tank wagon prices of 16 cents. At the present range of refinery costs there is a margin above the laid down cost of U. S. Motors gasoline which gives them with a selling price of 16 cents to the public, a margin on which to work of 5 cents a gallon. This allows the station owner a very liberal margin, more liberal than the present average of marginal contracts. With the over-building of filling stations and the many new concerns in the business there is a keenness of competition which almost forces cutting of prices when such spreads prevail. That the larger companies and in fact all companies that hold their prices to the regular scale must be losing business was evidenced by a visit to some of the cut-price stations. They are certainly doing a large trade. They also are inclined to be boastful of the size of their lubricating sales. Several customers of these stations stated in reply to a direct question that the gasoline judging by the results obtained was just as good as that to be had from stations where a higher price was asked. It was also suggestive that one-third of the buyers stated they had just begun using the gasoline, this being their first or second purchase. They stated they were buying the cheaper gasoline on the advice of friends who had used it and said it was alright. This experience gives cause for doubting the statements of some oil companies that the quality of gasoline is inferior at these cut-price stations.

There is really a psycological reason back of the success of these stations. Manufacturers, jobbers and retailers in many lines state the demand for lower prices from buyers is so strong that they have been afraid to stock up heavily for fall on any line which could not be sold as low if not a little lower in price than last season. Leading makes of popular articles are being reduced for no reason that can be seen except this demand for lower prices. Every reductionin prices on these largely advertised commodities is widely broadcast in the advertising pages and through comments in the reading columns and tends to increase the belief in the public mind that lower prices are to be expected, so that making of lower gasoline prices is really catering to a public demand.

EASTERN GASOLINE MARKET WEAK; PRICE COMPETITION NOT YET OVER

By N. O. Fanning

NEW YORK, Sept. 5.—A further reduction of one-half cent per gallon in the tank wagon price of gasoline by the Standard Oil Co. of New Jersey throughout its territory was the outstanding development in the refined oil markets during the past week. The tankwagon market in New Jersey is now 15½ cents.

The general gasoline situation throughout the Atlantic Seaboard is still weak. Competitive price reductions are not yet believed to be over. Although the statistical position of the gasoline market is not so exceptionally bad, the chief weakness in the situation lies in the sharp competition at service stations. So far the price cutting has been quite orderly, but if weather conditions or the approach of winter should cause a substantial drop in gasoline consumption, it is considered possible that the market might break further.

It is this possibility that has caused the large marketers of gasoline to shut down materially on production and they have been adopting a more conservative policy with regard to outside purchases. To this can be attributed the lack of buying in the Mid-Continent Field.

While California has been an important factor in the present weakness in gasoline on the Atlantic Seaboard, it is believed this has been overstressed in recent weeks. The movement of gasoline from the Pacific to the Atlantic this year has scarcely exceeded that of a year ago. Taking into account this fact and the increased consumption of gasoline on the eastern seaboard, to California cannot be laid the total blame for the current gasoline price reductions.

Students of the situation here lay the chief blame for the decline in the gasoline market to the service station situation. There has been gross overbuilding in this line, and the weakness in gasoline is believed directly attributable to the pressure to sell. Many are said to have been forced to take cheaper materiel which could be sold at a lower price in order to keep going. In other respects price cutting has been the direct and indirect result of the surplus of retail stations.

Oil Industry Not to Blame

Although many of the big oil companies have been leading in construction of service stations, they cannot be blamed, inasmuch as it is obvious they are the logical ones to operate them, being assured in so doing that their own brands are being sold to the consumer and knowing themselves where the supply is coming from. They have also been forced to build service stations in order to protect themselves, because of this and the large number being built by competitors, many of which operate gasoline stations only as a side line.

Fuel Oil Steady

The market for fuel oil on the Atlantic Seaboard is steady, but in this respect California is considered a real menace. It is understood that stocks of fuel oil on the Pacific are two to three times what would be considered a necessary surplus, and it is believed the eastern markets will be flooded during the winter from this source, which will naturally depress this market.

The demand for bunker fuel oil on the Atlantic Seaboard is only fair, but Diesel oil consumption is steadily increasing to new high records. This product and furnace oil have served to steady the market during the past week.

Bunker fuel oil continues to be noted at $1.65 per barrel and Diesel oil at $2.10. Furnace oil brings 9 or 10 cents, retail, in lots of 1,500 gallons. Several grades of this are available, as few oil burners require exactly the same fuel.

A big increase in fuel oil burning is looked for throughout the East due to the campaigns inaugurated by the oil companies this summer. Several new burners are on the market, and the efficiency of oil burning equipment as a whole has been improved greatly since last winter.

Kerosene Firm

Kerosene remains firm due to a revival in exports and a more general use of this product in the manufacture of furnace oil. Little change is looked for, although weakness might be expected in sympathy with the decline in gasoline and fuel oil quotations if for no other reason.

Lubricants Firm

The lubricating oil market continued unchanged with the demand better than might be expected at this time of year, especially the industrial demand.

Paraffin wax is steadier due to a revival in the export movement. Prices of this product are considered on the bottom at the present time.

Petrolatums Dull

No change for the better in the petrolatum market has been recorded. Prices still cling to their lowest levels.

The Export Market

Continued improvement in the oil export trade at New York has been registered during the past week. Kerosene and wax were the features. A revival of demand for paraffin wax for export to Europe resulted in total shipments of more than 2,000,000 pounds of refined wax during the past week, a gain of almost 200 per cent over the record of either the two previous weeks.

Shipments of kerosene continued large, case exports amounting to 2,889,680 gallons, againt 1,662,960 gallons the preceding week.

Crude oil shipments were quite heavy, amounting to 334,850 gallons, most of it going to European ports.

Tankers Market Dead

The tanker chartering market continued at a standstill, with no new fixtures reported. A drop in the intercoastal movement of oil is the main cause of further depression. Some of the biggest oil companies are reported to have laid up vessels during the past two weeks, increasing the number of idle tankers considerably.

The following table shows principal exports of petroleum and petroleum products from New York during past three weeks (figures in gallons unless otherwise noted in parenthesis):

	Week Ended—		
	Sept. 2	Aug. 26	Aug. 19
Gasoline—			
Bulk	.....	.....	3,337,273
Barrels	247,400	.....	.....
Cases	1,748,600	910,511	1,462,980
Kerosene—			
Bulk	.....	.....	667,413
Cases	2,889,960	1,662,960	2,750,430
Gas oil—			
Bulk	.....	.....	390,317
Lubricating oil—			
Bulk	.....	115,000	766,120
Barrels	943,450	890,100	1,855,200
Cases	81,210	47,640	217,290
Lubricating greases—			
Barrels (bbls.)	.....	.....	1,915
Paraffin wax—			
Bags (lbs.)	2,013,000	770,660	733,040
Crude oil—			
Barrels	334,850	.....	429,800

Consignments of less than 500 bbls. or 1,000 cases are not included in the foregoing table.

Oil Receipts Drop

Estimated daily average receipts of crude and refined oil by water at Atlantic Coast ports during the week ended September 2, were 346,000 bbls., against 484,000 the preceding week.

Receipts from the Gulf Coast averaged 267,000 bbls. daily, a decline of 50,000 bbls. Receipts from the Pacific Coast averaged 23,000 bbls., a decline of 62,000 bbls. Imports fell to 56,000 bbls. daily, a decrease of 26,000 bbls.

The record of California oil receipts of the past few weeks belies stories that California is the chief source of disturbance in the eastern market. Figures for the month of August also tend to prove this. Receipts for August averaged only 54,000 bbls. daily, against 127,000 bbls. during the same month of 1924.

The following table shows estimated daily average receipts of crude and refined oil by water at Atlantic Coast ports from the Gulf and Pacific coasts of the United States, and imports, for the last three months; also monthly record for the last 12 months (figures in bbls.):

	Week Ended—		
	Sept. 2	Aug. 26	Aug. 19
Gulf Coast	267,000	317,000	208,000
Pacific Coast	23,000	85,000	30,000
Imports	56,000	82,000	99,000
Total	346,000	484,000	337,000

	Daily Averages By Months		
	Gulf	Pacific	Impts.	Total
1925—				
August	291,000	54,000	90,000	435,000
July	391,000	63,000	107,000	561,000
June	379,000	66,000	118,000	563,000
May	312,000	81,000	145,000	538,000
April	353,000	78,000	101,000	532,000
March	273,000	82,000	135,000	490,000
Feb.	262,000	51,000	147,000	460,000
Jan.	311,000	77,000	133,000	521,000
1924—				
Dec.	306,000	83,000	85,000	474,000
Nov.	246,000	80,000	150,000	476,000
Oct.	246,000	120,000	88,000	454,000
Sept.	270,000	104,000	101,000	475,000

The foregoing estimates are based on the carrying capacity of incoming oil-laden tankers.

GULF SHIPMENTS LESS

HOUSTON, Tex., Sept. 7.—Incomplete reports of shipments of refined and crude oil by water from Gulf ports during August indicate a decrease as compared with July. The following table gives the difference as compiled to date:

Company—	Aug. R&C	July R&C
The Texas Co.	2,011,546	1,968,173
Gulf Ref. Co.	2,581,409	2,505,336
Sun Oil Co.	407,908	606,792
Humble O. & R.	*1,885,555	*3,021,221
Crown Central Pet.	455,557	322,727
Totals	7,341,975	8,434,249

*Crude only.

REFINERY AND CRUDE PRICES

Quotations on Principal Refined Products and Crude Petroleum Markets in All the American Oil Fields

GASOLINE AND NAPHTHA

	Sept. 8		Sept. 1		Aug. 25	
OKLAHOMA—(Group 3)—						
50-52 450 end point (Naphtha)	.07¾	.08	.08	.08¼	.09	.09¼
56-58 450 end point	.07⅞	.08	.08	.08¼	.09	.09¼
58 60 437 end point (U. S. Motor)	.08¼	.08½	.08½	.08⅝	.09¼	.09½
60 62 400 end point	.10	.10¼	.10¼	.10½	.10½	.10⅝
64 66 375 end point	.11	.11¼	.11¼	.11½	.11½	.11⅝
68-70 350 end point	.11¾	.12	.12	.12¼	.12½	.12⅝
KANSAS—						
58-60 437 end point (U. S. Motor)	.08½	.08¾	.08⅜	.09	.09¾	.10
NORTH TEXAS—						
48-52 450 end point (Naphtha)	.07¾		.08		.09	
50-52 440 end point (Naphtha)	.07¾	.08	.08	.08¼	.09	
56 58 450 end point	.07¾	.08	.08	.08¼	.09	.09¼
58-60 437 end point	.08¼	.08¼	.08½	.08¾	.09½	.09¾
60-62 400 end point	.09⅞	.10	.10¼		.10½	
64 66 390 end point	.10½	.10¾	.11	.11¼	.11¼	.11½
64-66 375 end point	.10¾	.11	.11¼	.11½	.11½	.11¾
68-70 360 end point	.11¾		.12		.12½	
NORTH LOUISIANA—						
56-58 450 end point	.08¾	.09	.08¾	.09	.09¾	.10
58 60 437 end point (U. S. Motor)	.09	.09¼	.09	.09¼	.10	.10½
60-62 400 end point	.10¾	.11	.10¾	.11	.11	.11¼
64 66 390 end point	.11½	.11¾	.11½	.11¾	.11¾	.12
64-66 375 end point	.11¾	.12	.11¾	.12	.12¼	.12½
ARKANSAS—						
58-60 450 end point	.08¾	.09	.08¾	.09	.09¾	.10
58 60 437 end point (U. S. Motor)	.09	.09¼	.09	.09¼	.10	.10¼
64-66 375 end point	.11¼	.11½	.11⅜	.12	.12	.12¼
ROCKY MOUNTAIN STATES—						
*58 60 437 end point (U. S. Motor)	.11¼	.11½	.11½	.11¾	.12¼	.12½
PENNSYLVANIA—						
52 Naphtha	.12	.12¼	.12¼	.12½	.12⅝	.13
54 Naphtha	.12	.12¼	.12½	.12⅝	.13	.13½
56 Naphtha	.12¼	.12½	.12⅝	.13	.13¼	.13½
58 Naphtha	.12½	.12⅝	.12½	.13	.13¼	.13½
60 Gasoline	.13½	.13¾	.13¾	.14	.14	.14¼
62 Gasoline	.14	.14½	.14½	.15	.15¼	.15½
64 Gasoline	.15¼	.15½	.15½	.16	.16	.16¼
66 Gasoline	.16	.16½	.16½	.17	.17	.17¼
68-70 Gasoline	.18½	.19	.18½	.19	.19	.19¼
CALIFORNIA—						
54-58 437 end point (U. S. Motor) domestic	.09	.09½	.11	.11½	.11	.11½
CHICAGO DIST. (Based on Group 3)—						
50-52 450 end point (Naphtha)	.08	.08¼	.08¾	.09	.09	.09¼
56-58 450 end point	.08	.08¼	.08½		.09	.09¼
58-60 437 end point (U. S. Motor)	.08½		.08¾	.09	.09¼	.09½
60 62 400 end point	.10	.10¼	.10¼	.10½	.11	.11¼
64-66 375 end point	.11	.11¼	.11¼	.11½	.11¾	.12
68 70 360 end point	.11¾	.12	.12	.12¼	.12½	.12¾

NATURAL GASOLINE

	Sept. 8		Sept. 1		Aug. 25	
OKLAHOMA—(Group 3)—						
Grade Double A, 80-87.9, 375 e.p., rec. 90%	.11½	.11¾	.11¾	.12	.11½	.12
Grade A, 72-79.9, 375 end point, rec. 90%	.11½	.11¾	.11¾	.12	.11½	.12
Grade Double B, 84-92, 375 e.p., rec. 85%	.11½		.11½	.11¾	.11½	.12
Grade B, 76 83.9. 375 end point, rec. 85%	.11½		.11½	.11¾	.11½	.12
Grade C, 80-90, 375 end point, rec. 78%	.11¼	.11½	.11½	.11¾	.11½	.12
NORTH TEXAS—						
Grade Double A, 80 87.9, 375 e.p., rec. 90%	.11½		.11½	.12	.11½	.12
Grade A, 72-79.9, 375 end point, rec. 90%	.11½		.11½	.11¾	.11½	.12
Grade Double B, 84 92, 375 e.p., rec. 85%	.11½		.11½	.11¾	.11½	.12
Grade B, 76-83.9. 375 end point, rec. 85%	.11½		.11½	.11¾	.11½	.12
Grade C, 80 90, 375 end point, rec. 78%	.11½		.11½	.11¾	.11½	.12
NORTH LOUISIANA—						
Grade A, 72-79.9, 375 end point, rec. 90%	.12	.12¼	.12½	.12¾	.12½	.12¾
Grade B, 76 83.9. 375 end point, rec. 85%	.12	.12¼	.12½	.12¾	.12½	.12¾
Grace C, 80-90. 375 end point, rec. 78%	.12	.12¼	.12½	.12¾	.12½	.12¾
CALIFORNIA—						
78 85 absorption, 360 390 end point	.11	.11½	.13	.13½	.13¼	.13¾
78 84 compression, 350 end point	.11½		.13½		.13½	
CHICAGO DIST. (Based on Group 3)—						
Grade Double A, 80-87.9, 375 e.p., rec. 90%	.11¼	.11½	.11½		.12	.12¼
Grade A, 72-79. 375 end point, rec. 90%	.11¼	.11½	.11½		.12	.12¼
Grade Double B, 84-92, 375 e.p., rec. 85%	.11¼		.11¼	.11½	.12	.12½
Grade B, 76 83.9. 375 end point, rec. 85%	.11¼		.11¼	.11½	.12	.12¼
Grade C, 80-90. 375 end point, rec. 78%	.11	.11¼	.11¼		.12	

MOTOR NATURAL GASOLINE (BLENDS)

	Sept. 8		Sept. 1		Aug. 25	
OKLAHOMA—(Group 3)—						
60 62 450 end point	.08¼	.08½	.08½	.08¾	.09¼	.09½
68-70 420 end point	.08½	.08¾	.09	.09¼	.09½	.09¾
NORTH TEXAS—						
58 60 450 end point	.08¼		.08½		.09¼	.09½
PENNSYLVANIA—						
*60 62	.13½	.13¾	.14	.14¼	.14½	.14¾
*64-66	.13½	.13¾	.14	.14¼	.14½	.14¾
*66-68	.13½	.13¾	.14	.14¼	.14½	.14¾
*68 70	.13½	.13¾	.14	.14¼	.14½	.14¾
CHICAGO DIST. (Based on Group 3)—						
60 62 450 end point	.08¼	.08½	.08¾	.09	.09¾	.10
68-70 437 end point	.08½	.08¾	.09	.09¼	.10	

*At Sistersville, W. Va.

BURNING OIL

	Sept. 8		Sept. 1		Aug. 25	
KANSAS—						
41-43 water white Kerosene	.04¾	.05	.04⅝	.04¾	.04½	.04¾
OKLAHOMA—(Group 3)—						
41-43 water white Kerosene	.04¾	.05	.04⅝	.04½	.04¼	.04⅝
42-44 water white Kerosene	.05¼		.05		.04¾	.05
40-41 prime white Kerosene	.04	.04⅛	.04	.04⅛	.04	.04⅛
NORTH LOUISIANA—						
41-43 prime white Kerosene	.05	.05¼	.04¾	.05	.04¾	.05
42-44 water white Kerosene	.05¼	.05½	.05	.05¼	.05	.05¼
ROCKY MOUNTAIN STATES—						
*40 44 water white Kerosene	.07½	.07¾	.07¼	.07⅜	.07⅛	.07¼
NORTH TEXAS—						
41-43 water white Kerosene	.04⅜	.04½	.04¼	.04⅝	.04⅛	.04¼
40-42 prime white Kerosene	.04	.04⅛	.04	.04⅛	.04	.04⅛
41-43 prime white Kerosene	.04¼	.04⅜	.04⅛	.04¼	.04⅛	.04¼
42-44 water white Kerosene	.04⅞	.05	.04⅞	.05	.04½	.04⅝
ARKANSAS—						
41-43 water white Kerosene	.04¾	.05¼	.04¾	.05	.04¾	.05
42-44 water white Kerosene	.05¼	.05½	.05¼		.05	.05¼
PENNSYLVANIA—						
43 Kerosene prime white	.06	.06¼	.06	.06¼	.06	.06½
45 Kerosene water white	.06¼	.06½	.06¼	.06½	.06¼	.06½
46 Kerosene water white	.06½	.06¾	.06½	.06¾	.06½	.06¾
47 Kerosene water white	.06¾	.07	.06¾	.07	.06¾	.07
34 Neutral	.07	.07¼	.07	.07¼	.07	.07¼
34 Sundebloom Neutral	.08	.09	.08½	.09	.08½	.09
36 Miners' Neutral	.06¾	.07	.06¾	.07	.06¾	.07
300 Mineral Seal	.07	.07¼	.07	.07¼	.07	.07¼
CALIFORNIA—						
40-42 water white (high burning test)	.07½	.08	.07½	.08	.07½	.08
Engine distillate, 43-45 445 end point	.08½	.09	.08½	.09	.08½	.09
Engine distillate, 42-45 480 end point	.07¾	.08	.07¾	.08	.07¾	.08
CHICAGO DIST. (Based on Group 3)—						
41-42 water white Kerosene	.04½	.04¾	.04¾	.04½	.04¼	.04½
42-44 water white Kerosene	.05	.05¼	.04¾	.05	.04¾	.05

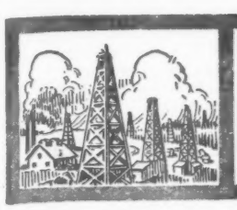
*Colorado points.

FUEL OILS

	Sept. 8		Sept. 1		Aug. 25	
KANSAS—						
24-26 Fuel Oil	1.15		1.10	1.15	1.15	
32-36 Gas Oil	.03¼	.03⅜	.03¼	.03⅜	.03⅜	.03⅝
38 40 Distillate	.03¾	.03⅞	.03⅝	.03¾	.03¾	.03⅞
OKLAHOMA—(Group 3)—						
Below 22 Fuel Oil (sellers' cars)	1.00		.95		.95	1.00
22-26 Fuel Oil (sellers' cars)	1.00	1.05	.95	1.00	1.00	
24-26 Fuel Oil (buyers' cars)	1.02½	1.05	.97½	1.02½	1.00	1.02½
24-26 Fuel Oil (sellers' cars)	1.02½	1.05	.97½	1.02½	1.00	1.02½
28-30 Fuel Oil (sellers' cars)	1.10	1.15	1.05	1.07½	1.07½	1.10
32-36 Gas Oil	.03⅛	.03¼	.02⅞	.03	.03	.03⅛
36-38 Distillate	.03¼	.03½	.03¼	.03½	.03¼	.03½
38 40 Straw Distillate	.03⅝	.03¾	.03½	.03⅝	.03½	.03⅝
NORTH TEXAS—						
24-26 Fuel Oil (sellers' cars)	1.10	1.12½	1.07½	1.10	1.10	
26 30 Fuel Oil	1.12½	1.15	1.10	1.12½	1.12½	1.15
32-36 Gas Oil	.03⅛	.03¼	.03	.03⅛	.03	.03¼
38-40 Straw Distillate	.03½	.03¾	.03½		.03⅜	.03½
NORTH LOUISIANA—						
18-20 Fuel Oil	1.00	1.05	1.00		1.00	
32-36 Gas Oil	.03½	.03¾	.03½	.03¾	.03½	.03¾
ARKANSAS—						
38-40 Distillate	.03⅝	.03¾	.03⅝	.03¾	.03⅝	.03¾
32-36 Gas Oil	.03½	.03⅝	.03½		.03½	
22-26 Refinery Fuel Oil	1.05	1.10	1.05	1.10	1.05	
GULF COAST (South Texas)—						
Gas Oil	.05	.05¾	.05	.05¾	.05	.05¾
Fuel Oil	1.45	1.50	1.45	1.50	1.45	1.50
PENNSYLVANIA—						
30-34 Fuel Oil	.05⅛	.05¼	.05⅛	.05¼	.05⅛	.05⅝
36-40 Fuel Oil	.05⅝	.05½	.05½	.05⅝	.05⅝	.05¾
CALIFORNIA—						
33-36 Distillate	.04¾	.05	.04⅞	.05	.04¾	.05
27-33 Distillate	.04	.04½	.04	.04½	.04	.04½
15-20 Fuel Oil (at tidewater)	1.20	1.25	1.20	1.25	1.50	1.55
27 plus Diesel Oil	1.40	1.50	1.75	1.80	1.75	1.80
CHICAGO DIST. (Based on Group 3)—						
24-26 Fuel Oil (sellers' cars, Group 3)	1.05	1.10	.97½	1.00	1.02	1.07
18-22 (El Dorado)	1.00	1.05	.95	1.00	1.00	1.05
18-20 (Smackover)	1.00	1.05	.95	1.00	.97½	1.02½
32-36 Gas Oil	.03	.03¼	.03⅛	.03¼	.03⅛	.03¾
36-38 Distillate	.03⅝	.03¾	.03¾	.03⅝	.03½	.03¾
38-40 Straw Distillate	.03¾	.04	.03⅝	.03⅞	.03¾	.03⅞

LUBRICATING OILS AND WAX

	Sept. 8		Sept. 1		Aug. 25	
OKLAHOMA—(Group 3)—						
79-80 vis., 2½ color, 20-25 cold test	.05¼	.05½	.05¼	.05½	.05¼	.05½
100 vis., 3 color, 20-25 cold test	.05¾	.06	.05⅞	.06	.06	.06¼
100 vis., 2 color, 20-25 cold test	.06¼	.06½	.06¼	.06½	.06	.06¼
150 vis., 3 color, 25-30 cold test	.10½	.11	.10½	.11	.10½	.11
150 vis., 4 color, 20-25 cold test	.10¼	.10¾	.10¼	.10¾	.10¼	.10¾
180 vis., 4 color, 23-28 cold test	.10¾	.11¼	.10¾	.11¼	.10¾	.11
180 vis., 3 color, 23-28 cold test	.11	.11½	.11	.11½	.11	.11½
200 vis., 3 color, 23-28 cold test	.12	.12½	.12	.12½	.12	.12½
200 vis., 4 color, 23-28 cold test	.11¾	.12¼	.11¾	.12¼	.11¾	.12¼
220 vis., 3 color, 25-30 cold test	.14½	.15	.14½	.15	.14½	.15
220 vis., 4 color, 25-30 cold test	.14	.14½	.14	.14½	.14	.14½
240 vis., 3 color, 25-30 cold test	.16	.16½	.16	.16½	.16	.16½
240 vis., 4 color, 25-30 cold test	.15½	.16	.15½	.16	.15½	.16
280 vis., 3 color, 25-30 cold test	.17½	.18	.17½	.18	.17½	.18
280 vis., 4 color, 25-30 cold test	.16½	.17	.16½	.17	.16½	.17
Red Neutrals:						
180 vis., 5 color, 23-28 cold test	.10½	.11	.10½	.11	.10½	.11
180 vis., 6 color, 23-28 cold test	.10	.10½	.10	.10½	.10	.10½
200 vis., 5 color, 23-28 cold test	.11½	.12	.11½	.12	.11½	.12
200 vis., 6 color, 23 28 cold test	.11	.11½	.11	.11½	.11	.11½
220 vis., 5 color, 25,30 cold test	.13½	.14	.13½	.14	.13½	.14
220 vis., 6 color, 25-30 cold test	.13	.13½	.13	.13½	.13	.13½
240 vis., 5 color, 25-30 cold test	.15	.15½	.15	.15½	.15	.15½
240 vis., 6 color, 25-30 cold test	.14½	.15	.14½	.15	.14½	.15
280 vis., 5 color, 25-30 cold test	.15½	.16	.15½	.16	.15½	.16
Cylinder Stocks:						
180-200 vis., S. R. green, 40-45 cold test	.09	.09½	.09	.09½	.09	.09½
190-200 vis., S. R. green, 40-45 cold test	.08	.08½	.08	.08½	.08	.08½
170-190 dark green, 40-45 cold test	.06½	.07	.06½	.07	.06½	.07



REFINERY AND CRUDE PRICES

Quotations on Principal Refined Products and Crude Petroleum Markets in All the American Oil Fields

190-200 vis. @ 210 "D" Bright Stock	.36		.36		.36	
200-210 vis. @ 210 "E" Bright Stock	.31		.31		.31	
150 vis. @ 210 "D" Bright Stock	.30	.32	.30	.32	.30	.32
150 vis. @ 210 "E" Bright Stock	.28		.28		.28	
Waxes:						
124-126 White Crude Scale Wax	.05¼	.05½	.05¼	.05½	.05¼	.05½
PENNSYLVANIA—						
150, 3 color	.17		.17		.17½	
180, 3 color	.21		.21		.21	
200, 3 color	.23		.23		.23	
220, 3 color	.25		.25		.25	
600 steam refined	.15¼		.15¼		.15½	
635, steam refined	.19¼		.19¼		.19½	
650, steam refined	.20½		.20½		.21	
600 Pennsylvania flash	.24½		.24½		.25	
630 Pennsylvania flash	.33		.33		.34	
*550, E filtered	.19¾		.19¾		.20	
*600 E filtered	.20¾		.21½		.22	
600, E filtered	.19½		.21		.21	
600, D filtered	.26½		.26½		.28	
550, E filtered	.19		.19		.19	
550, D filtered	.23		.23		.23	
Pennsylvania Bright Stock	.38		.38		.38	
122-124 White Crude Scale Wax	.05½		.05½		.05½	
‡124-126 White Crude Scale Wax	.05⅝		.05⅝		.05⅝	

*At Warren, Pa. ‡At New York City.

GULF COAST (South Texas)—						
Zero Black	.06	.07	.06	.07	.06	.07
No. 2 color, 100 vis., pale oil	.07½	.08	.07½	.08	.07½	.08
No. 2 color, 150 vis., pale oil	.10	.11	.10	.11	.10	.11
No. 3 color, 200 vis., pale oil	.12	.12½	.12	.12½	.12	.12½
No. 3 color, 300 vis., pale oil	.14	.14½	.14	.14½	.14	.14½
No. 3½ color, 500 vis., pale oil	.16	.16½	.16	.16½	.16	.16½
No. 3½ color, 750 vis., pale oil	.18½	.19	.18½	.19	.18½	.19
No. 4½ color, 1200 vis., pale oil	.24½	.25	.24½	.25	.24½	.25
No. 4 color, 2000 vis., pale oil	.29	.30	.29	.30	.29	.30
No. 2 plus color, 150 vis., pale filtered	.21½		.21½		.21½	
No. 2 plus color, 200 vis., pale filtered	.23		.23		.23	
No. 2½ minus color, 300 vis., pale filtered	.26½		.26½		.26½	
No. 2½ color, 500 vis., pale filtered	.30½		.30½		.30½	
No. 2½ color, 800 vis., filtered	.04½		.04½		.04½	
No. 5 to 6 color, 200 vis., red oil	.10½	.11	.10½	.11	.10½	.11
No. 5 to 6 color, 300 vis., red oil	.12½	.13	.12½	.13	.12½	.13
No. 5 to 6 color, 500 vis., red oil	.14½	.15	.14½	.15	.14½	.15
No. 5 to 6 color, 750 vis., red oil	.18½	.19	.18½	.19	.18½	.19
CALIFORNIA—						
130 pale, 2½-3 color	.12	.12½	.12	.12½	.12	.12½
200 vis., 2½-3 color	.15½	.16	.15½	.16	.15½	.16
300 vis., 3 -3½ color	.17	.17½	.17	.17½	.17	.17½
350 vis., 3½-4 color	.18½	.19	.18½	.19	.18½	.19
400 vis., 3½-4 color	.20	.20½	.20	.20½	.20	.20½
Red Neutrals:						
200 vis., 4½-5 color	.14	.14½	.14	.14½	.14	.14½
300 vis., 5 -6 color	.15	.15½	.15	.15½	.15	.15½
400 vis., 5 -6 color	.17	.17½	.17	.17½	.17	.17½
500 vis., 4½-5 color	.20	.21	.20	.21	.20	.21
500 vis., 6- 6½ color	.18	.19	.18	.19	.18	.19
600 vis., 6½ plus color	.19	.19½	.19	.19½	.19	.19½

Note: Bright stocks are not manufactured commercially on the Pacific Coast.

NEW YORK DOMESTIC MARKET

Bayonne Refinery Prices:	Sept. 8	Sept. 1	Aug. 25
U. S. Motor Gasoline, 58-60 437	.13	.14½	.14½
*Bunker Oil, 14-16 Be.	1.65	1.65	1.65
Diesel Oil, New York City	2.10	2.10	2.10
Furnace Oil, New York City	.10	.10	.10
Gas Oil, 32-36 Be.	.06¼	.06¼	.06¼
41-43 Kerosene prime white	.06	.06¼	.06¼

*Literage, 6.5c a barrel extra.

NEW YORK EXPORT PRICES

Motor Gasoline:	Sept. 8	Sept. 1	Aug. 25
58-60 Be. gravity, in cases	.28.15	28.15	.28.15
U. S. Navy, in bulk	.14	.14	.14
Naphtha:			
60° F., 59-61 Be. gravity, in bulk	.16¼	.16¾	.16¾
60° F., 62-63 Be. gravity, in bulk	.17½	.18	.18
60° F., 66-68 Be. gravity, in bulk	.19	.19½	.19½
Kerosene:			
Standard white, 40-42 Be. grav., in bulk	.05¾	.05¾	.05¾
Standard white, 40-42 Be. grav., in bbls.	.12¾	.12¾	.12¾
Standard white, 40-42 Be. grav., in cases	.16.15	.16.15	.16.15
Water white, 42-44 Be. grav., in bulk	.06¾	.06¾	.06¾
Water white, 42-44 Be. grav., in bbls.	.13¾	.13¾	.13¾
Water white, 42-44 Be. grav., in cases	.17.15	.17.15	.17.15
‡Lubricating Oils (in bulk):			
Cylinder Stock, extra filtered, 600 barrels	.35	.35	.35
Cylinder Stock, light filtered, 600 barrels	.30	.30	.30
No. 1 white Neutral, .878 spec. grav.	.36	.36	.36
No. 5 Bright Stock, .897 spec. grav.	.40	.40	.40
Special "A" red oil, .897 spec. grav., 170 vis.	.12	.12	.12
No. 2 red oil, .903 spec. grav., 212 vis.	.13	.13	.13
No. 1 red oil, .905 spec. grav., 265 vis.	.14	.14	.14
Polar red oil, .903 spec. grav., 295 vis.,	.15	.15	.15
Pale oil, "25" .899 spec. grav.	.13½	.13½	.13½
Pale oil, "28" spec. grav.	.09	.09	.09
Paraffin Wax:			
120-122 a.m.p., per lb.	.06⅛	.06⅛	.06⅛
125-127 a.m.p., per lb.	.06¼	.06¼	.06¼
130-132 a.m.p., per lb.	.06⅝	.06⅝	.06⅝
135-137 a.m.p., per lb.	.07½	.07½	.07½
Petrolatum, in bbls., carload lots, per lb.:			
Amber	.03	.03	.03
Light amber	.03¾	.03¾	.03¾
Cream	.06	.06	.06

‡All lub prices in barrels.

LOS ANGELES EXPORT PRICES

	Sept. 8		Sept. 1		Aug. 25	
Kerosene water white	.05	.05½	.05	.05½	.05½	.06
U. S. Motor Gasoline, 54-56 437 end point	.08¾	.09¼	.10¾	.11¼	.10¾	.11½

CRUDE OIL PRICES

Arkansas and North Louisiana

Caddo, 38° and above	$1.95
35° to 37.9°	1.85
32° to 34.9°	1.75
Below 32°	1.65
Homer, 35° and above	1.75
32° to 34.9°	1.65
31° to 32.9°	1.55
Below 31°	1.40
Haynesville, 33° and above	1.65
Below 33°	1.55
El Dorado, 33° and above	1.65
Below 33°	1.55
Bull Bayou, 38° and above	1.75
35° to 37.9°	1.60
32° to 34.9°	1.45
Cotton Valley	1.10
De Soto	1.80
Crichton	1.60
Bellevue	1.65
*Stephens, Ark.:	
Below 26°	1.20
26° and above	1.40

*Posted by Atlantic Oil Producing Co.

Smackover:

(Standard Oil Co. of Louisiana)

Below 24°	.85
24° to 24.9°	1.15
25° to 25.9°	1.20
26° to 26.9°	1.25
27° and above	1.30

(Posted by The Texas Co.)

Below 24°	.85
24° to 25.9	1.05
26° and above	1.35

(Atlantic Oil Producing Co.)

Below 23°	.90
23° to 23.9°	.95

Wyoming and Montana

Rock Creek (Wyo.)	1.75
Salt Creek:	
29° to 29.9°	1.23
30° to 30.9°	1.31
31° to 31.9°	1.39
32° to 32.9°	1.47
33° to 33.9°	1.55
34° to 34.9°	1.63
35° to 35.9°	1.71
36° to 36.9°	1.79
37° and above	1.87
Big Muddy	1.75
Mule Creek	1.25
Grass Creek (light)	1.90
Elk Basin	1.90
Lance Creek	1.90
Osage	1.90
Cat Creek (Mont.)	1.90
Sunburst (Mont.)	1.30
Lost Soldier	1.35
Greybull and Torchlight	1.90
Hamilton Dome	1.55
Hogback, N. Mex.	1.95
Artesia (N. Mex.)	1.45

Lost Soldier and Lander based on contracts.

Oklahoma, Kansas, North and East Central Texas

Prairie Oil & Gas Co. and other major purchasing companies, except as noted:

28° to 28.9°	1.15
29° to 29.9°	1.23
30° to 30.9°	1.31
31° to 31.9°	1.39
32° to 32.9°	1.47
33° to 33.9°	1.55
34° to 34.9°	1.63
35° to 35.9°	1.71
36° to 36.9°	1.79
37° to 37.9°	1.87
38° to 38.9°	1.95
39° to 39.9°	2.03
40° to 40.9°	2.11
41° to 41.9°	2.19
42° to 42.9°	2.27
43° to 43.9°	2.35
44° to 44.9°	2.43

*Humble Oil & Refining Co.

(North Texas, Ranger, Mexia, Powell, Richland, Wortham, Lytton Springs, Currie, Moran)

28° to 28.9°	1.35
29° to 29.9°	1.41
30° to 30.9°	1.47
31° to 31.9°	1.53
32° to 32.9°	1.59
33° to 33.9°	1.65
34° to 34.9°	1.71
35° to 35.9°	1.77
36° to 36.9°	1.83
37° to 37.9°	1.89
38° to 38.9°	1.95
39° to 39.9°	2.01
40° to 40.9°	2.07
41° to 41.9°	2.13
42° to 42.9°	2.19
43° to 43.9°	2.25
44° and above	2.31

Magnolia Petroleum Co.—

Below 28°	1.00
28° to 30.9°	1.35

Other grades same as Humble Oil & Refining Co. in Texas and Prairie Oil & Gas Co. in Oklahoma and Kansas.

Gypsy Oil Co.—

Bristow, Glenn Pool, Morris and Perryman:

25° to 25.9°	.91
26° to 26.9°	.99
27° to 27.9°	1.07

Other grades same as Prairie Oil & Gas Co.

*The Texas Co. pays Humble schedule in Texas and the Prairie Oil & Gas Co. schedule in Oklahoma.

California

14° to 19.9°	1.25
20° to 20.9°	1.27
21° to 21.9°	1.30
22° to 22.9°	1.33
23° to 23.9°	1.36
24° to 24.9°	1.40
25° to 25.9°	1.44
26° to 26.9°	1.48
27° to 27.9°	1.52
28° to 28.9°	1.56
29° to 29.9°	1.60
30° to 30.9°	1.64
31° to 31.9°	1.68
32° to 32.9°	1.72
33° to 33.9°	1.76
34° to 34.9°	1.80
35° and above	1.85

Rosecrans-Athens Field only:

Below 35.9° gravity, same as other fields.

36° to 36.9°	1.92
37° to 37.9°	2.00
38° to 38.9°	2.08
39° to 39.9°	2.16
40° to 40.9°	2.24
41° to 41.9°	2.32
42° and above	2.40

Gulf Coast

Grade A	1.50
Grade B	1.25
Luling (Magnolia)	1.40
Laredo (Magnolia Petroleum Co.)	.85
Lockhart (Magnolia)	2.25
Rockdale-Minerva (Milam County)	1.25
Callihan (Live Oak-McMullen)	2.05
Webb, Jim Hogg, Zapata	1.15
*High Island	1.20

*Posted by Sun Oil Co.

*Somerset

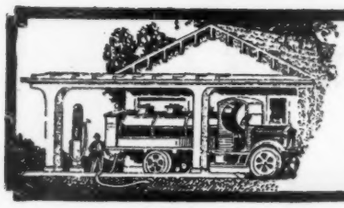
Below 30°	1.25
30° to 32.9°	1.35
33° to 35.9°	1.80
36° to 38.9°	1.95
39° to 41.9°	2.10
42° and above	2.35

*Posted by Grayburg Oil Co.

Eastern States

Penna Grade Oil in New York Transit Lines	3.15
Bradford District Oil in National Transit Lines	3.15
Penna Grade Oil in National Transit Lines	3.05
Penna Grade Oil in Southwest Pa. Pipe Lines	3.05
Penna Grade Oil in Eureka Pipe Line Lines	3.00
Penna Grade Oil in Buckeye Pipe Lines	2.80

(Continued on Page 144)



TANK WAGON MARKETS

Tank wagon quotations for gasoline and kerosene in United States as furnished by the larger marketing concerns, Sept. 8.

ALL TANK WAGON AND SERVICE STATION QUOTATIONS INCLUDE TAXES

STANDARD OIL CO. (INDIANA)
Main Service Station Price

	Gasoline Tank wagon	Gasoline Service station	Gasoline Incids tax	Kero. Tank wagon
Chicago Dist.—				
†Less than 100 gals.	16.0	18.0	...	11.0
Decatur, Ill.	13.0	15.0	...	11.5
East St. Louis	15.1	17.35	...	10.6
Joliet	14.4	18.4	...	11.7
Peoria	13.0	15.0	...	11.7
Quincy	16.2	18.2	...	11.3
Davenport, Ia.	18.5	20.5	2.0	11.9
Des Moines	17.5	19.5	2.0	11.9
Keokuk	18.5	20.5	2.0	11.9
Sioux City	18.0	20.0	2.0	11.5
Duluth, Minn.	19.5	21.5	2.0	12.6
Minneapolis	19.2	21.2	2.0	12.6
La Crosse, Wis.	19.2	21.2	2.0	12.1
Milwaukee	18.1	20.1	2.0	11.3
Madison	18.3	20.3	2.0	11.5
Detroit, Mich.	18.8	20.8	2.0	12.2
Grand Rapids	18.7	20.7	2.0	12.1
Saginaw	18.9	20.9	2.0	12.3
Evansville, Ind.	19.0	20.0	3.0	11.5
Fort Wayne	19.4	21.4	3.0	11.9
Indianapolis	19.2	21.2	3.0	11.7
South Bend	19.4	21.4	3.0	11.9
Fargo, N. D.	19.9	21.9	3.0	14.6
Huron, S. D.	17.5	19.5	3.0	13.1
Sioux Falls	19.5	21.5	3.0	12.6
*K. C. Mo.	17.9	19.9	3.0	10.3
*Springfield	18.8	20.8	3.0	11.2
*St. Louis	17.6	19.9	2.5	11.0
*St. Joseph	18.0	20.0	2.5	10.9
Wichita, Kan.	10.8	12.8	2.0	10.8
Bartlesville, Ok.	17.9	19.9	3.0	9.9

*State tax is 2c. Remainder is city tax.
†Quantity price on more than 100 gallons, 15.0.

Tank wagon prices on April 19, 1923: g. up 1¼ c; May 8, g. up 1c; June 27, both up 1c; July 19, g. down 2c; k. down 1c; Oct. 10, g. down 2c; Oct. 21, g. down 1c; Feb. 5, 1923, g. up 1c; Feb. 20, g. up 1c; Aug 14, g. down 6.6c; Oct. 4, k. down 1¼c; Nov. 10, g. down 1.4c; Dec. 20, g. up 2c; Jan. 12, 1924, g. up 2c; k. up 1c; Feb. 6, g. up 2c; k. 1c; July 18, g. down 1c; July 30, g. and k. down 1c; Sept. 12, g. down 2c; Jan. 23, 1925, g. up 1c; Jan. 26, g. up 1c; Jan. 31, g. up 1c; Feb. 12, g. up 2c; k. up 1c; April 19, g. down 1c; July 14, g. up 1c; Aug. 25, g. down 2c, k. down 1c; Sept. 1, g. down 1c.

The following monthly rebate system is effective on tank wagon schedules throughout the territory of the Standard Oil Co. of Indiana: Over 750 gallons, ½ cent; over 2,000 gallons, ¾ cent; over 3,000 gallons, 1 cent; over 6,000 gallons, 1¼ cents; over 10,000 gallons, 2 cents. If quantity bought during the year is equal to 12 times the monthly agreed purchases the discount will be paid or credited on the entire quantity less monthly payments. Service station customers will receive discount of 1 cent a gallon on purchases amounting to 200 gallons a month or 2,400 gallons a year; and 2 cents a gallon on 600 gallons a month or 7,200 gallons a year.

ATLANTIC COAST DISTRICT

Standard Oil Co. (New Jersey)

	Gasoline Tank wagon	Gasoline Service station	Gasoline Incids tax	Kero. Tank wagon
Newark, N. J.	15.5	17.5	...	12.5
Atlantic City	15.5	...	...	12.5
Annapolis, Md.	18.5	...	2.0	12.0
Baltimore	17.5	19.5	2.0	11.0
Cumberland	18.5	20.5	2.0	12.0
Washington	17.5	19.5	2.0	11.0
Norfolk, Va.	19.5	21.5	3.0	13.0
Peterburg	19.5	...	3.0	13.0
Danville	19.5	...	3.0	13.0
Richmond	19.5	21.5	3.0	13.0
Roanoke	19.5	21.5	3.0	13.0
Keyser, W. Va.	20.0	...	3.5	13.0
Charleston	19.5	21.5	3.5	13.0
Parkersburg	19.5	20.5	3.5	13.0
Wheeling	19.5	20.5	3.5	13.0
Charlotte, N. C.	20.5	22.5	4.0	14.0
Hickory	20.5	...	4.0	14.0
Mt. Airy	20.5	...	4.0	14.0
Sallisbury	20.5	...	4.0	14.0
Charleston, S. C.	21.5	23.5	5.0	14.5
Columbia	21.5	24.5	5.0	14.5

SOUTHERN DISTRICT

Standard Oil Co. (Kentucky)

	Gasoline Tank wagon	Gasoline Service station	Gasoline Incids tax	Kero. Tank wagon
Atlanta, Ga.	18.0	21.0	3.0	13.0
Augusta	22.0	25.0	3.0	14.5
Macon	22.0	25.0	3.0	13.5
Savannah	20.0	23.0	3.0	13.0
Birmingham, Ala.	20.0	23.0	3.0	14.5
Mobile	19.0	22.0	2.0	11.0
*Montgomery	21.0	24.0	3.0	15.5
Clarksdale, Miss.	20.0	23.0	3.0	12.9
Jackson	20.0	23.0	3.0	9.0
Natchez	19.5	22.5	3.0	11.5
Vicksburg	19.5	22.5	3.0	11.5
Jacksonville, Fla.	21.0	24.0	4.0	13.0
Miami	23.0	26.0	4.0	14.5
Pensacola	21.0	24.0	4.0	13.5
Tampa	21.0	24.0	4.0	13.0
Lexington, Ky.	20.0	23.0	3.0	14.0
Covington	20.0	23.0	3.0	14.0
Louisville	20.0	23.0	3.0	14.0

*In addition to the State tax of 2 cents on gasoline, Montgomery has city tax of 1 cent on gasoline and ½ cent on kerosene.

PENNSYLVANIA-DELAWARE AND PART NEW ENGLAND

Atlantic Refining Co.

	Gasoline Tank wagon	Gasoline Service station	Gasoline Incids tax	Kero. Tank wagon
*Pittsburgh, Pa.	17.0	22.0	...	14.0
*Philadelphia	17.0	22.0	...	14.0
*Scranton	17.0	22.0	...	14.0
*Allentown	17.0	22.0	...	14.0
Altoona	17.0	22.0	...	14.0
*Erie	17.0	22.0	...	14.0
Dover, Del.	19.0	22.0	2.0	14.0
Wilmington	19.0	22.0	2.0	14.0
Springfield, Mass.	16.0	19.0	...	13.0
Worcester, Mass.	16.0	19.0	...	13.0
Boston	16.0	19.0	...	13.0
Providence, R. I.	17.0	20.0	1.0	13.0
Hartford, Conn.	18.0	21.0	2.0	12.0
New Haven, Conn.	18.0	21.0	2.0	12.0

*Pennsylvania tax of 2 cents is collected by the dealer and paid by him direct to the State.

SOUTHWESTERN DISTRICT

*Magnolia Petroleum Co.

	Gasoline Tank wagon	Gasoline Service station	Gasoline Incids tax	Kero. Tank wagon
Dallas, Tex.	17.0	19.0	1.0	12.0
Fort Worth	16.0	18.0	1.0	10.0
Houston	17.0	21.0	1.0	12.0
San Antonio	17.0	20.0	1.0	12.0
El Paso	16.0	21.0	1.0	13.0
Muskogee, Okla.	19.0	22.0	3.0	11.0
Oklahoma City	18.6	21.6	3.0	11.0
Tulsa	19.0	22.0	3.0	11.0
Ft. Smith, Ark.	18.0	21.0	4.0	12.0
Little Rock	16.5	19.5	4.0	10.0
Texarkana	16.0	20.0	1.0	12.0

The following is the schedule of discounts on gasoline adopted by the Magnolia Petroleum Co. in Texas sales and the discounts are graded according to gallonage; Over 750 gallons a month, one-half cent; over 2,400 gallons, three-fourths cent; over 3,000 gallons, 1 cent; over 6,000 gallons, 1½ cents; over 10,000 gallons, 2 cents; over 9,000 gallons a year, one-half cent; over 24 000 gallons a year, three-fourths cent; over 36,000 gallons a year, 1 cent; over 72,000 gallons a year, 1½ cents; over 120,000 gallons a year, 2 cents.

The schedule on service station deliveries is: Over 200 gallons a month, 1 cent; over 600 gallons a month, 2 cents; over 2,400 gallons a year, 1 cent; over 7,200 gallons a year, 2 cents.

CENTRAL SOUTH DISTRICT

Standard Oil Co. (Louisiana)

	Gasoline Tank wagon	Gasoline Service station	Gasoline Incids tax	Kero. Tank wagon
*New Orleans	16.5	19.5	3.0	10.0
Alexandria	14.5	17.5	2.0	11.0
Baton Rouge	14.0	17.0	2.0	9.5
LaFayette	15.0	18.0	2.0	10.5
Lake Charles	15.0	18.0	2.0	11.0
Shreveport	14.0	17.0	2.0	10.0
Memphis, Tenn.	16.5	16.5	3.0	12.0
Chattanooga	17.0	20.0	3.0	12.5
Knoxville	18.0	21.0	3.0	13.0
Nashville	17.0	17.0	3.0	12.5
Bristol	18.5	18.5	3.0	12.5
Little Rock, Ark.	16.5	19.5	4.0	10.0

*Tax of 3 cents includes city tax of 1 cent.

NEW YORK AND PART OF NEW ENGLAND DISTRICT

Standard Oil Co. (New York)

	Gasoline Tank wagon	Gasoline Service station	Gasoline Incids tax	Kero. Tank wagon
Albany, N. Y.	18.0	...	...	13.0
*New York	17.0	....	...	13.0
Buffalo	18.0	...	..	13.0
Rochester	18.0	...	..	13.0
Syracuse	18.0	...	..	13.0
Boston, Mass.	16.0	...	...	....
Providence, R. I.	17.0	....	1.0	....
Augusta, Me.	21.0	....	3.0	13.0
Manchester, N. H.	20.0	...	2.0	13.0
Burlington, Vt.	20.0	...	2.0	13.0

*Price in steel barrels.
Note: Standard Oil Co. of New York does not generally quote service station price in its territory. In most cases the service station price is 2 or 3 cents higher than tank wagon price.

PACIFIC COAST DISTRICT

Standard Oil Co. (California)

	Gasoline Tank wagon	Gasoline Service station	Gasoline Incids tax	Kero. Tank wagon
San Francisco	17.0	20.0	2.0	15.5
Los Angeles	13.5	16.5	2.0	15.5
Fresno	17.5	20.5	2.0	19.5
Reno, Nev.	22.5	25.5	4.0	19.0
Portland, Ore.	18.0	21.0	2.0	16.5
Stattle, Wash.	17.0	20.0	2.0	16.5
Tacoma	17.0	20.0	2.0	16.5
Spokane	21.0	24.0	3.0	20.5
Phoenix, Ariz.	23.0	26.0	3.0	21.5

OHIO

Standard Oil Co. (Ohio)

	Gasoline Tank wagon	Gasoline Service station	Gasoline Incids tax	Kero. Tank wagon
All Ohio points	19.0	21.0	2.0	12.0

ROCKY MOUNTAIN DISTRICT

Continental Oil Co.

	Gasoline Tank wagon	Gasoline Service station	Gasoline Incids tax	Kero. Tank wagon
Casper, Wyo.	19.5	21.5	2.5	12.0
Cheyenne	21.0	23.0	2.5	14.5
Albuquerque, N. Mex.	23.5	26.5	3.0	16.5
Salt Lake, Utah	23.0	25.0	3.5	18.0
Denver, Colo.	19.0	21.0	2.0	14.5
Pueblo	19.0	21.0	2.0	14.5
Butte Mont.	21.0	21.0	2.0	16.0
Helena	23.0	25.0	2.0	17.0
Boise, Idaho	24.0	26.0	3.0	20.6

NEBRASKA

Standard Oil Co. (Nebraska)

	Gasoline Tank wagon	Gasoline Service station	Gasoline Incids tax	Kero. Tank wagon
Omaha	17.5	19.5	2.0	11.5
Crawford	19.0	....	2.0	12.25
McCook	19.75	21.75	2.0	13.0
Norfolk	18.75	20.75	2.0	12.0
North Platte	19.75	21.75	2.0	12.75
Scotts Bluff	19.25	21.25	2.0	12.25

TANK WAGON PRICE CHANGES

September 3—Magnolia Petroleum Co. reduced tank wagon and service station prices of gasoline 1 cent at Little Rock and Texarkana. Standard Oil Co. of Louisiana reduced gasoline a half cent throughout Louisiana except Alexandria; and 1 cent in Arkansas and Tennessee, except Memphis and Nashville. At Memphis the tank wagon was cut 1½ cents and service station 4½ cents. At Nashville, the tank wagon was cut 1 cent and the service station 3 cents. Continental Oil Co. reduced gasoline one-half cent at Boise City, Idaho, and 1 cent at Albuquerque, N. Mex. Standard Oil Co. of New Jersey reduced gasoline one-half cent throughout its territory.

September 4—Standard Oil Co. of California reduced gasoline 2 cents in Los Angeles.

September 5—Atlantic Refining Co. reduced gasoline 1 cent throughout its territory. Standard Oil Co. of Nebraska reduced tank wagon price of gasoline at Omaha three-fourths cent.

September 7—Magnolia reduced the service station price of gasoline 2 cents at Dallas.

CRUDE PRICE CHANGES

September 1—Magnolia Petroleum Co. adopted the Prairie Oil & Gas Co. schedule in Oklahoma and Kansas.

LEASE SUIT DISMISSED FOLLOWING AGREEMENT

AMARILLO, Tex., Sept. 5.—Contrary to published reports, the case of E. B. Johnson and others against George E. Montgomery and others involving questions affecting leases on a large acreage in the Panhandle of Texas, was not decided by the court in favor of the defendants who included a large number of prominent oil companies. According to J. B. Dooley, one of the attorneys in the case, the court did not make a decision in the case which, he says, was not tried on its merits. The court records in the case show that on August 24 the plantiffs in the case announced that as a consequesce of certain settlements, they no longer would prosecute the action against the defendants who included the Prairie Oil & Gas Co., Vacuum Oil Co., the Gulf Production Co., Sinclair Oil & Gas Co., Skelly Oil Co., Texas & Pacific Coal & Oil Co., Brothers Oil Co., New Domain Oil & Gas Co., Emerald Oil Co., Roswell Oil & Development Co., Dorset Carter, Willoughby G. Walling, J. H. Cottingham, Lawrence R. Hagy, Charles A. Fisk, Charles T. Fertig, W. Scott Heywood, Gene B. Heywood, A. W. Heywood, A. W. Heywood, E. A. Haines, J. W. Greathouse, Margie C. Caperton and H. C. Tyrrell. As a result, the court ordered that the case be dismissed. The case was put over for one week pending further settlement then in process of being arranged.

Growth in the Future To Equal Past, Says Chairman Bedford

NEW YORK, Sept. 5.—Business and assets of the Standard Oil Co. of New Jersey were more than tripled from 1912, the year following dissolution, to 1923, according to A. C. Bedford, chairman of the board of directors, in an address to the training class for employes conducted by the company.

"As an illustration of the progress by this company," he said, "let me give you a comparison of the business done in 1912 and 1923. In 1912 the total business was approximately 38,000,000 bbls. of 50 gallons each and the net assets were something like $300,000,000. In 1923 the total business was over 116,000,000 bbls. and the net assets were $944,000,000.

"In other words, the company has increased its business as well as its assets three times since 1912, thereby keeping pace with the great growth of the industry, and at the same time has made itself a complete and balanced entity. There is no equal opportunity, if not greater, for our assets to increase and I think you will see as great a change in years to come as in the early history of the industry."

CRUDE OIL BRICES

(Continued from Page 143)

Cabell Grade Oil in Eureka Pipe Line Lines	2.10
Corning Grade Oil in Buckeye Pipe Line Lines	1.60
Somerset Medium Oil in Cumberland Pipe Line Lines	2.20
Somerset Light Oil in Cumberland Pipe Line Lines	2.35
Ragland Grade Oil in Cumberland Pipe Line Lines	1.10
Gaines	2.70
Lima	1.98
Wooster	2.00
Illinois	1.88
Indiana	1.88
Princeton	1.87
Plymouth	1.40
Waterloo	1.00
Oil Springs, Canada	2.45
Petrolia, Canada	2.38
*Western Kentucky, 36° and above,	1.90
*Western Kentucky, 35° to 35.9°	1.80
*Western Kentucky 32.9° and below	1.70
Cumberland, Barren and Monroe Counties (Kentucky), (Paragon Development Co.)	2.35

*Prices for Warren, Allen, Hancock, Simpson and Ohio Counties by Indian Refining Co.

Mexican Crude

*Tuxpam (f.o.b. Mexican ports)	1.45
†Panuco (f.o.b. Mexican ports)	1.25
Tuxpam (New York)	2.00
Panuco (New York)	1.67

*Plus 33.00c tax. †20.00c tax.

STANDARD OF INDIANA TO ENLARGE BUILDING

CHICAGO, Sept. 5.—Col. Robert W. Stewart, chairman of the board, announces that the Standard Oil Co. of Indiana will enlarge its present building at 910 South Michigan Avenue, adding seven additional floors, making the structure 19 stories high when completed.

The present 12-story building was purchased in 1917 for $2,500,000, the ground for $1,000,000, making the total cost $3,500,000. The additional stories will cost approximately $2,000,000.

A large meeting room or assembly hall capable of seating from 350 to 500 people will be provided for use when meetings of representatives from various offices and refineries throughout the entire territory are held here. A restaurant for executives, managers and department heads, with facilities to serve a large gathering of representatives will be installed, which together with the assembly hall, will permit the company to accommodate any meeting under its own roof.

SINCLAIR OILS

THE SINCLAIR dealer is more than merely a customer of the Sinclair Refining Company. With each sale to him there goes the assurance of our help in his own selling problems, whenever he requests it. He is related to us as one Sinclair Department is to another.

The rapid growth of the Sinclair Refining Company is due largely to our close alliance with dealers. We can only grow as Sinclair dealers grow.

SINCLAIR REFINING COMPANY

NEW YORK
Sinclair Oil Bldg., 45 Nassau St.
Telephone: Rector 9320

CHICAGO
22nd and Rockwell Streets
Telephone: Crawford 2000

Cable Address: "Lucent"

Absorbers in Natural Gasoline Plants

Combination of Steel Shavings With Pans or Trays Having Perforated Bottoms Is Best Filler. Should Be Anchored to Foundations

By Frank P. Peterson

To date, in absorbers as in most other details of plant, form of materials, construction and arrangement are about where they began in the latter half of the last century. This is not intended as discredit to the industry or its sponsors and purveyors. Simply, we have had nothing to do. True, a few details have had some intensive attention; the matter especially of interior construction, baffles, retarders, diffusing elements, however, you may choose to name them. I think it can be stated that some slight progress has been made here as against precedent available from the older arts using equipment of the type and for the purpose served.

The convenient name, saturater, has been applied in ammonia works and in the separation of benzol from tar products. Other applications have used a corrective term, "concentrator," where the process is the same but without removal of the absorbed element and recycling of the absorbent; and in our own application, the boys in the "connection gangs" often twist the name somewhat to suit their own perception and refer to the apparatus as "exhorbers" glibly enough to indicate that in reality it may not matter greatly just what we may call this detail of equipment.

Since the relative cost of the detail is not great it might be assumed that efficiency referred to unit cost and capacity is somewhat secondary as referred to the elements employed in construction. Since the reduction to a working standard of about 30 per square inch pressure of the gas being worked has been almost universally adopted for casinghead gas, a corresponding reduction in cost of plate work has permitted liberal use of steel shells. The absorbent medium lends convenience and economy of handling to high towers and a vertical rising traverse of the gas against a falling flow of the oil. This detail of flow control is as old as the type of equipment. Early steps of adaptation of the process to natural gasoline extraction used some horizontal chambers fed with absorbent oil through spray nozzles. That form of effort for diffusive contact was erroneous in that it would not be made progressive.

Selective Absorption

Since charcoal has been applied in a way parallel to oil for removal of gasoline hydro-carbons, we have heard considerable discussion of a phenomenon termed "selective absorption." Charcoal does its work, however, through an interesting physical process called occlusion or more properly, according to Burrell, "absorption." To one unversed in the niceties of physics and chemistry, and the writer must make honest confession to this crudity, the distinction involved is somewhat obscure. The observable difference in the phenomena is not difficult to perceive. Charcoal, seemingly with little regard for pressure as an affecting condition, goes about its tank with a vigor and definite reaction quite perceptible to the senses. The claim is made that when the state of full saturation (by occlusion), is reached for the charcoal in one fraction of the natural gasoline group of petroleum hydrocarbons, where a heavier group is also present, the charcoal proceeds to reject or throw out the lighter group or compound and select in its stead a heavier, and to continue so doing, until the peculiar nature of the charcoal is satiated with the heaviest compound present. And the evidences of this interesting reaction are, we believe, rather easily and definitely demonstrated.

While the same phenomena is much more difficult to obberve for the similar case of oil, the writer concludes that it exists in terms of selective absorbtion and only remains to be clearly demonstrated by apparatus of the form now being exploited by Oberfell for examination of the subject in terms of vapor pressure. And so, a logical combination might yet be worked out along lines of finely atomized oil diffusion for final stripping of a gas stream. Admitting the probable truth of the contention that what escapes as tail gas content loss is gasoline of the most stable and desirable grade in an efficiently operated plant, there is food for interesting consideration, at least, of ways and means for its effective recovery and, as a method, the intensive application of atomized oil might be worth a tryout, especially in plants handling very rich gas in moderate volumes.

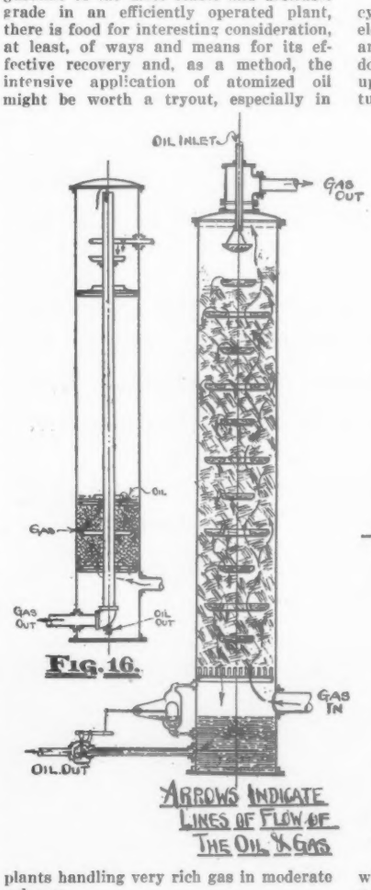
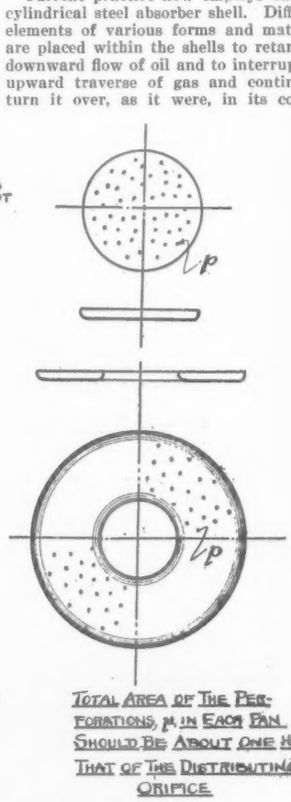


FIG. 16.

ARROWS INDICATE LINES OF FLOW OF THE OIL & GAS



TOTAL AREA OF THE PERFORATIONS, P, IN EACH PAN SHOULD BE ABOUT ONE HALF THAT OF THE DISTRIBUTING ORIFICE

FIG. 15

The conclusion is quite well established that the absorber element of plant is all important. Any inefficiency here is final and measurable as direct loss to operation. The most efficient absorbers are, therefore, sought.

Time Element

An element of time in the contact of gas with the absorbent medium seems to have been established for good practice at something like 1 minute. This element of time has been referred, it seems to the writer, rather arbitrarily to control of the gas in the flow scheme. Retardation of the oil flow in the absorber chamber, if it has been studied, has not been presented in discussion of its resultant terms, and this again is worthy of investigation in those terms of selectivity hinted at above.

In 1910 and 1911 an extensive series of observations were carried out by the Bessemer Gas Engine Co. to determine on a labratory scale how long a period of time an oil "claroline" required for removal of the gasoline hydro-carbons from a gas sample in which they were present. Three minutes was the period of time finally selected as the minimum in which effective results were obtained. Diffusion of the gas with the oil was not effectively carried out, however, agitation at intervals being substituted to serve a method of comparative analyses.

Where good diffusion is obtained in absorbers a time of contact as short as one minute is sought, at present, to be sufficient. It remains to be seen whether this factor will be reduced.

Current practice now employs an open cylindrical steel absorber shell. Diffusing elements of various forms and materials are placed within the shells to retard the downward flow of oil and to interrupt the upward traverse of gas and continually turn it over, as it were, in its contact with the oil. These diffusing elements are conveniently called fillers.

Best Filler

The best filler which it would be possible to make would, in the writer's judgment, be a combination of steel shavings, cut to specification, and pans or trays having perforated bottoms.

A sketch, Figure 15, is presented, showing such form of construction and Figure 16 indicates a further modification of the suggested form, self contained to the extent structurally that it would easily be made up and shipped filled, ready for erection and immediate use as soon as placed on foundation. Expanded metal both in cartridge form would meet nicely the requirement of such ready made type.

One manufacturer claims to strip 2,430,000 cubic feet of gas daily in a single phase absorber 36 inches diameter and only 22 feet high. This means a gas contact period of only 5.52 seconds. If the stripping is efficient, this accomplishment is a long step in the evolution of absorbers. He claims a foam or froth contact, and this with permissibly small pressure drop. Every such claim is worthy of serious consideration, since the art in refining and treatment of all the fractions of the vast complex group of petroleum hydro-carbons has yielded, through unflagging patience and persistence, such amazing accomplishment.

Vertical types of equipment for mechanical agitation of the oils of absorption for gas contact diffusion have been employed with success as absorbers for recovery of gasoline from natural gas, and scrubbers of this type have been rather widely used in other arts similar in nature and calling for parallel treatment; but the cost, investment, maintenance and operation, may be expected to run relatively high, and the writer has been unable to appreciate any gain to be realized in these more complicated forms of absorber equipment.

One feature which has, generally, been overlooked to date in construction and assembly of absorber equipment is bolt anchorage of the absorbers to their foundations. Where these shells are erected in multiples of two or more, more than one day is required to hoist and anchor them in position. The anchorage is by guys, and, due to the annoyance of the erector, especially in the plains country where brisk winds are prevalent, cases have been noted where shells after erection and temporary guying, have almost danced off their foundations over night. Four or even two small anchor bolts, ⅞ inch to 1 inch in each base block would in every instance repay their cost several times over. It is difficult usually to keep the assembly of a battery of absorbers in correct position long enough to make several pipe connections to them without continually re-setting them in their true base positions, the wastage of erection labor incident being very considerable.

Condensers

The foregoing is the ninth of a series of articles on natural gasoline plant construction and operation. In the eighth article, which appeared in The Oil and Gas Journal, Mr. Peterson discussed condensers. Following is additional data which he desires to add to his previous discussions:

Gasoline condensers are usually arranged adjacent to gas cooling coils. Receivers or, as most frequently termed, run down tanks, can then be placed, if desired, adjacent to accumulators of low field gas and recompressor condensates. And, in order to be able to alternate the flow of absorption condensates from one channel to another for purposes of gauging pressure transfer into storage or otherwise two receivers in parallel are usually provided. In large installatons the best practce will provide pumps for transfer of the gasoline from receivers to storage and in the case of such provision, it is not necessary to duplicate the receiver equipment.

From data of practice and the foregoing it is logical to provide in the conventional assembly of 2-inch pipe, return bend, aerially cooled coils 0.275 square feet of surface per gallon per 24 hours, this for the combination steam and fire type of still. With condensers specially adapted for the higher efficiency of heat transfer 3.5 to 4.0 square feet of tube surface will do the same work.

There are rational limits of extension of the length of coil beyond which it is not necessary to go. In fact, when considering the arrangement of some 2-inch coils in service one is inclined to criticize as excessive the reach of traverse, as high sometimes as 480 lineal feet. Sixty to one hundred and twenty feet in a tubular type of equipment is ample and offers better form of arrangement.

Three Stills Have Large Throughput

Efficient Heat Exchange and Condensing Equipment at Sun Company Refinery Increases Capacity of Crude Battery. Eliminates Rerunning

By C. O. Willson

A throughput of 2,500 and 3,000 bbls. daily from which five finished overhead products except for sweetening are obtained is the unusual performance of a crude battery of three shell stills—each 9 by 33 feet—at the refinery of the Sun Co., located at Yale, Okla. The Oklahoma company is a subsidiary organization of the Sun Oil Co., which operates other refineries at Marcus Hook, Pa., and Toledo, Ohio, and also has large crude producing and marketing interests.

The present operations are the result of changes made at the plant about a year and a half ago under the direction of Henry Thomas and Arthur Pew, Jr., engineers, connected with the manufacturing department of the Sun Oil Co. with headquarters in Philadelphia. The operation is under the immediate supervision of C. B. Carter, superintendent.

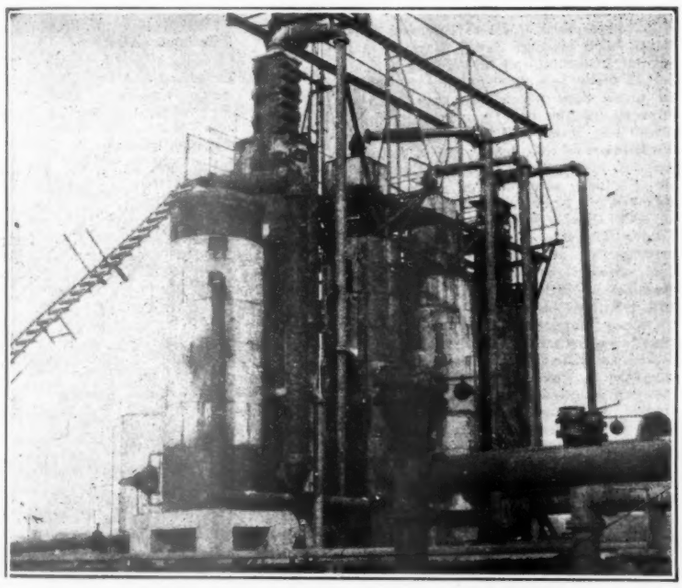


Fig. 1—Four Southwestern condensers and towers of crude battery at Sun Co. refinery. Evaporator tank from which first gasoline cut is obtained before entering first shell still is shown on left.

The increased output of finished products at lowered costs per barrel of crude is an additional demonstration of the progress being made in refinery operation largely through more efficient heat exchange and condensing equipment and better fractionating methods. A few years ago three shell stills similar in size to those now in operation at the Sun refinery with the old methods of operation could not have handled more than 1,000 to 1,500 bbls. of crude whether operated continuously or batch. The gasoline and kerosene from the skimming operation would also have had to be treated and rerun before being ready to market.

Operating on crude from 38 to 40 degrees Baume gravity a 10 to 12 per cent yield of 68-70 Baume gasoline is obtained before the crude enters the first shell still. This is made possible through an efficient method of preheating the crude by means of exchangers and condensers to a temperature of approximately 375 degrees Fahrenheit, from which the high gravity gasoline yield is obtained.

Condensing Equipment

The condenser which is also an important feature of the fractionating equipment and the exchangers are shown in Figures 1 and 2. The four Southwestern condensers on top of the four towers are of the portable type with which the trade is generally familiar. The tubes carry the crude and the condensate traps back into the towers with the vapor passing out to the water condensers of the Sterling type. The Southwestern condensers have an unusually high transfer rate and through the overhead crane arrangement shown in Figure 2 are easily cleaned.

Two multi-whirl heat exchangers shown in Figure 2 are used in the preheating. The hot residuum or fuel oil from the last shell still first passes through the coils of what is called the second exchanger where it comes in contact with crude after it has passed through the first exchanger and also the Southwestern condensers. The first exchanger is shown in Figure 2 to the left with the thermometer attached and the second exchanger adjoining. These exchangers are about 12 feet long and 2 feet in diameter. By-pass lines connect the exchangers, making possible an accurate control of the amount of crude or fuel oil passing through each unit. The exchangers and all lines are insulated.

Kinney hot oil rotary pumps, motor driven, also shown in Figure 2, are used. In the operation cycle, two pumps are required, one being used for crude and the other fuel oil. A third pump is provided for use when necessary to relieve the two pumps in operation. The exchangers and pumps are located in a brick and concrete building to the rear of the condenser boxes and towers. Most of the control gauges and instruments needed in the operation of the towers and preheating system are located in this room.

Method of Operation

In operation the crude from the storage enters the first exchanger. Here it comes in contact with the coils carrying hot fuel oil which has previously passed through the second exchanger. The crude then passes to a small evaporator tank, part of which is shown to the rear of the towers and the main evaporator in Figure 1. Here provision is made to take off a high gravity cut provided the crude has been brought to the necessary temperature. This stream is small, being about 72 degrees Baume gravity.

The crude passes from the small evaporator to the Southwestern condenser above the first tower, and from there through the remaining three condensers. After passing through the condensers, the crude returns to the exchangers where it enters the second unit coming in contact with the coils carrying the hot residuum direct from the last shell still.

The exact heat exchange will vary with the method of operation, but ordinarily the condensers will add about 125 degrees Fahrenheit and the last exchanger 100 degrees, so that the crude leaves the last exchanger at about 375 degrees Fahrenheit. As previously explained the exchangers are connected so that the temperatures are easily controlled to meet any requirements deemed necessary by the operators.

From the last exchanger the crude goes to the large evaporator shown in Figure 1 to the left of the four towers. Here by means of an automatic float control the liquid is maintained at a uniform level in the evaporator. The crude from the evaporator passes to the first shell still while the vapors pass to the bottom of the first tower.

This tower is a combination bubble and baffle type designed by the Sun Co. The vapors passing up through the tower come in contact with the baffles and also the reflux of the tower and the condenser above. This cut generally has a gravity of 68-70 degrees Baume with the usual end point to make it a marketable product as it is sold by the Sun Co. without blending with lower gravity material. The end point of the overhead material is determined by this tower and all the three remaining towers by means of thermometers which automatically control the amount of crude passing through the condenser. This contral is flexible and can be changed so that the battery will handle products of any end point desired.

The reflux from the first and second tower traps back to the first shell still. The vapor line from the first shell still as shown in Figure 2 connects to the bottom of the second tower. From this tower the main gasoline cut having U. S. Motor gravity specifications with a 400 end point is obtained. From the third tower which is connected to the second shell still a special painter's naphtha for which the Sun companies have a wide distribution is secured.

Kerosene Cut

The overhead stream from the fourth and last tower is the kerosene cut. This cut can be made to meet any kerosene specifications desired. The reflux from the tower is a gas oil cut which is used as a base in making an absorption oil for natural gasoline plants. The finished absorption oil is made at the Yale plant, two shell stills adjoining the crude battery being used for that purpose. The second tower is the packed type and the last two, bubble towers.

The overhead yield, including the gas oil, will total about 60 per cent of the crude charge stills, with a residuum meeting 24-26 gravity fuel oil specifications. As previously explained no rerunning or acid treatment of the gasoline and kerosene is necessary. Only sweetening treatment is required.

To most plant operators visiting the refinery, the use made of the Southwestern condensers is the most interesting feature. These condensers not only preheat the crude and reduce the amount of condensation by water required, but at the same time through the condensation of the heavier ends of the vapor as reflux automatically control the entire scheme of fractionation.

The crude entering the first condenser gradually increases in temperature, the total increase, as previously explained, being approximately 125 degrees Fahrenheit. The fact that the temperature is lowest when it enters the first condenser knocks back all but the lighter ends. As the temperature rises in succeeding condensers more and more of the heavier ends are allowed to come over as finished products. In other words this method of gradually increasing the temperature gives a control over fractionation through the reflux which assures the desired separation of the vapor constituents. It is apparent that much depends on the method of operating the battery. However, no trouble has been experienced in this regard at the Sun refinery. With the aid of the several control instruments, no increase in the operating force has been necessary to handle the additional crude capacity.

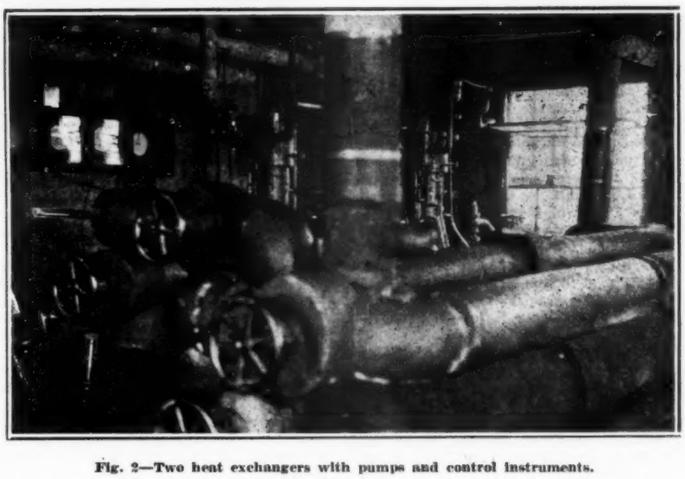


Fig. 2—Two heat exchangers with pumps and control instruments.

There are several other interesting

features at the Sun refinery. As shown in Figure 3, the run down tanks for the crude battery are underground. These are old 8,000-gallon tanks taken from tank cars, one being provided for each product. This arrangement has several advantages over the usual flat-bottom tanks above ground. In the first place the tanks are air tight and this is an aid in the gas recovery system which is maintained at the refinery resulting in a substantial recovery of gasoline and residue gas for heating.

The underground feature tends to prevent high temperatures always associated with the above ground tanks subjected to the sun's rays of an Oklahoma summer. This is also an important factor in reducing evaporation loss. At the Sun refinery the arrangement is also more convenient for the stillmen who gauge the tanks since the receiving house is on the same level as the top of the tanks. The refinery is located on a slope and as is shown in Figure 1 this has made necessary some changes in the usual plant design. It made possible the location of the receiving house at the ground level to the right of the water condensers and the towers. The run down tanks are to the right of the receiving house. As shown in Figure 3, the tanks are easily accessible for pumping through the manifold arrangement at the heads of the tanks.

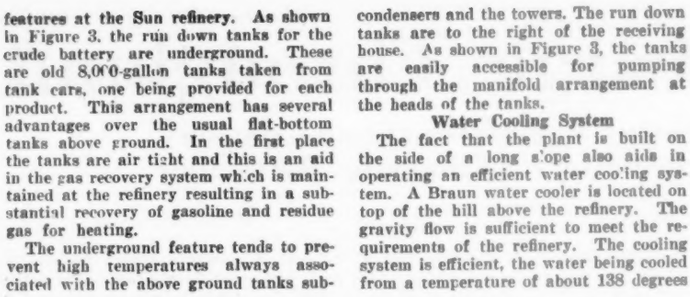


Fig. 3—Underground run down tanks and manifold arrangement for pumping. Laboratory in background.

Water Cooling System

The fact that the plant is built on the side of a long slope also aids in operating an efficient water cooling system. A Braun water cooler is located on top of the hill above the refinery. The gravity flow is sufficient to meet the requirements of the refinery. The cooling system is efficient, the water being cooled from a temperature of about 138 degrees Fahrenheit to 4 to 6 degrees below atmospheric temperature. Only 3,500 bbls. are required in circulation. Earthen storage provides a reserve supply.

Insulation

The manufacturing division of the Sun companies believes in insulation as an important factor in economical operation and maintenance. Practically all vapor lines are covered with asbestos. The stills and towers have 3 inches of asbestos and this is covered with metal sheeting.

INCREASED OUTPUT OF REFINABLE CRUDES

(Continued from Page 22)

tham, Limestone-Navarro Counties, Texas, from 57,100 bbls. to 43,500 bbls. The only considerable gain shown in this class of oil was in the Seely-Westcott Field in Greenwood County, Kansas, from 4,845 bbls. to 9,000 bbls., and the Thomas Pool in Kay County, Oklahoma from 900 bbls. to 3,800 bbls.

Variations in Kansas Pools

An increase of 29,856 bbls. a day may be recorded in the production of crude of 40 to 40.9 gravity. Pools in Cowley County, particularly Rainbow Bend, increased from 15,250 bbls. to 19,500 bbls.; Pixley-Teeter, Greenwood County, Kansas, from 5,400 bbls. to 14,700 bbls., and Braman (townsite and North Braman) from 2,150 bbls. to 20,100 bbls. The Braman Pool may be expected to increase its output, but the Teeter and Rainbow Bend Pools may have passed peak output.

There are more fields averaging from 38 to 39.9 gravity oil than any other. Many of them are old producing areas like the Indiana and Illinois fields, Cushing, Burkburnett, Butler County, Kansas, and others, and they produce more oil than any other class of fields. On May 1 their combined output was 298,758 bbls. and on September 1, 304,455 bbls. Declines in Cromwell, Papoose and Wewoka in the Okfuskee-Seminole and Hughes County area, Oklahoma, were offset by increases in Rosecrans in California, which produced 17,000 bbls. on May 1 and 25,500 bbls. on September 1; pools in Greenwood County, Kansas, and Reagan County, Texas, where the Big Lake Field's production jumped from 18,000 to 33,000 bbls.

The 36 to 37.9 class of oil showed practically no change in the four months' period, 285,890 bbls. on May 1, and 285,356 bbls. on September 1, a decline of 543 bbls. per day. Decreases in Burbank, Oklahoma, and Powell and Mexia, Texas, were offset by increases in Salt Creek, Wyoming, and some Louisiana fields.

A decline of 1,073 bbls. per day is seen in the fields averaging 34 to 35.9 gravity crude, with no pronounced changes in any of the fields of that class.

In the 32-33.9 class of fields, Santa Fe Springs, California, made a gain from 48,000 bbls. on May 1 to 53,000 bbls. on September 1, but the total increase was only 4,155 bbls. In the 30 to 31.9 fields, Dominguez, California, showed a falling off from 46,000 bbls. on May 1 to 20,000 bbls. on September 1, while Sunburst, Montana, increased from 3,225 bbls. on May 1 to 11,500 bbls. on September 1. The total increase in the production of oil of this class was 8,585 bbls.

The increase in the production of 28-29.9 crude of 2,700 bbls. may be attributed to the Cotton Valley-Elm Grove area in Louisiana, where the combined production advanced from 9,100 bbls. to 12,000 bbls.

California Fields Up and Down

The net increase in heavy refinable crudes was 24,925 bbls. On May 1 the production of this class of oil was 451,100 bbls., and on September 1, 476,025 bbls. Most of this oil is produced in California and its gasoline content runs from 10 per cent upwards. The big peak production of Inglewood more than offset losses in Long Beach, Midway-Sunset, Montebello, Elk Hills and Torrance.

On May 1 the production of the Smackover heavy oil was approaching its peak and was 291,600 bbls. (revised). On September 1 it had fallen to 180,000 bbls., a drop of 111,600 bbls. a day, and this accounts for the falling off of 77,693 bbls. in non-refinable crude oil, which on May 1 was 527,673 bbls., and on September 1, 449,980 bbls.

The average production of straight refinable crude in 1924 was 1,614,985 bbls. a day, while on September 1 this year it was 1,704,985 bbls., showing an increase of 90,000 bbls. a day. The peak production of crude suitable for straight refining process was reached in August, 1923, 1,940,000 bbls., indicating a decline since that time of 235,015 bbls. a day, when the Stepember 1 figures are compared with it.

CALIFORNIA ATTENTION FOCUSSED ON MARICOPA

(Continued from Page 21)

when the demand is lowest remains to be seen. A check of tankers now on the way from the Atlantic seaboard indicates that September loadings will be about up to par.

Surplus During 1925

As previously mentioned, no great relief can be anticipated as a result of a precipitous drop in crude production. There is at present approximately 45,000 bbls. a day shut in, 15,000 bbls. of which is at Coalinga, 8,000 bbls. in the Midway-Sunset area, 8,000 bbls. at Elk Hills, 4,000 bbls. at Lost Hills and Belridge, 4,000 bbls. at Santa Maria, 5,000 bbls. at Fullerton and the balance spread out at other points. The present crude oil production, which has been on the increase for the past few months, indicates that there will be a surplus for the balance of this year without disturbing any of the wells restricted at present. If deep sand drilling at Maricopa does not get beyond bounds, the summer of 1926 should find operators in better shape. There is, of course, many a slip between the cup and the lip.

If production should show signs of dropping off late this year the industry will find itself starting off 1926 in much the same manner in which the present year was ushered in. For a time it looked as though 1925 was to be a big one from a financial standpoint due to lower production and a substantial increase in consumption. Commercial sales and consumption have come up to expectations, but this improvement was offset by a substantial increase in production, due principally to the rapid development of Inglewood.

Under ordinary conditions it usually requires a year in California for a field to reach its maximum output. Inglewood, however, proved an exception because of the shallow depth, 2,500 feet, at which production was secured. Maricopa today is nearly as threatening as was Inglewood early this year, as production will jump by leaps and bounds if the Obispo sand is proven up as highly productive. The first increase in this area will be due to the deepening of present producers, which should be tapping the Obispo sand within 90 days. The word threatening is used advisedly and, while some operators believe production at Maricopa will be spotted, my tip is to watch it closely, for any substantial increase there surely means a cut in crude and refined oils, in addition to retarding recovery of the industry for another year. Much depends on the outcome of deep drilling in this area and it will be well to maintain a pessimistic attitude for the next 60 days at least.

NORTH CENTRAL TEXAS

(Continued from Page 32)

um Co.'s No. 7 Rogers, 5 bbls. oil and 17 bbls. water at 1,341 feet; Murchison & Fain's No. 1 Richardson, dry at 1,350 feet; Norman Oil Co.'s No. 7 Goldsmith, dry at 1,430 feet; Panhandle Refining Co.'s No. 4 Rogers, dry at 1,334 feet; Ted Harris and others' No. 1 Lester, dry at 1,616 feet; Perkins and others' No. 4 Anderson, 65 bbls. at 1,420 feet; Waite Phillips Co.'s No. 5 Wolf, 45 bbls. at 1,390 feet; No. 6 Wolf 60 bbls. at 1,389 feet; No. 7 Wolf, 20 bbls. at 1,389 feet; No. 8 Wolf dry at 1,456 feet; Prairie Oil & Gas Co.'s No. 1 Anderson, 30 bbls. at 1,432 feet; No. 1 Richardson, 15 bbls. at 1,303 feet; No. 25 Richardson, 27 bbls. at 1,316 feet; Terminal Oil Co.'s No. 1 Falls County, dry at 1,600 feet; The Texas Co.'s No. 7 Hill, 49 bbls. at 1,302 feet; No. 8 Hill, 25 bbls. at 1,377 feet; No. 8 Richardson, 78 bbls. at 1,390 feet; Texas-Pacific Oil Co.'s No. 1 Boren, 17 bbls. at 1,080 feet.

Young County

Fultz & Albright's No. 1 McLaren, dry at 2,420 feet; Humble Oil & Refining Co.'s No. 3 Kilcrease, 15 bbls. at 1,004 feet; No. 9 Mercer, 35 bbls. at 1,078 feet; Madden and others' No. 1 Hamilton, dry at 1,080 feet; Mooers and others' No. 1 Hamilton, dry at 1,080 feet; No. 2 Logan, 16 bbls. at 1,223 feet; Murchinson & Fain's No. 15 Campbell, 250 bbls. at 974 feet; No. 16 Campbell, 25 bbls. at 975 feet; No. 17 Campbell, dry at 1,030 feet; Murchinson & Fain and Marland Co.'s No. 2 Campbell, dry at 1,042 feet; Petroleum Producers' No. 3 Kilcrease, dry at 1,035 feet; Roxana Petroleum Corp.'s No. 1 Vernon, dry at 1,088 feet; Snowden & McSweeney's No. 1 Henderson, 75 bbls. at 2,545 feet; Texas Unity Oil Co.'s No. 8 Hausler, 80 bbls. at 1,081 feet.

Stephens County

Quakins Oil Co.'s No. 3 Bruce, dry at 2,105 feet; Strawn Petroleum Co.'s No. 24 Stuart, dry at 2,500 feet; Tidal Oil Co.'s No. 1 Mayhall dry at 3,746 feet.

Eastland County

Robert Oil Corp.'s No. 5 McMinn, 15 bbls. at 1,500 feet; No. 4 Petit, 200 bbls. at 1,485 feet; Landreth Production Corp.'s No. 1 Wilkerson, dry at 4,032 feet.

Brown County

Canyon Oil & Gas Co.'s No. 4 Ellsberry is dry at 1,416 feet; Gilman and others' No. 15 Newton, 105 bbls. at 1,289 feet; J. K. Hughes Development Co.'s No. 2 Ardedge, dry at 1,330 feet; No. 1 Moore 6,000,000 feet gas at 1,090 feet; Prairie Oil & Gas Co.'s No. 1 Armstrong, dry at 3,484 feet.

Reagan County

Big Lake Oil Co.'s No. 40 University, 1,751 bbls. at 2,900 feet; Texon Oil & Land Co.'s Group 1 No. 20 University, 1,904 bbls. at 2,917 feet.

Wildcats—Moore County

Amarillo Oil Co.'s No. 1-A Masterson 20,000,000 feet gas at 2,300 feet.

Carson County

Marland Oil Co.'s No. 2 Burnett, 125 bbls. at 3,042 feet.

Wheeler County

Texhoma Oil & Refining Co.'s No. 1 Jackson, 50 bbls. at 2,246 feet.

Baylor County

McDonnald & Smith's No. 1 Upshur County, dry at 1,666 feet.

Clay County

J. O'Neal and others' No. 1 Alcorn, dry at 3,420 feet; Knox-Finley's No. 1 McLaren, dry at 2,420 feet.

Shackelford County

Hays and others' No. 1 Leschber, 10 bbls. at 446 feet; Hope Petroleum Co.'s No. 1 Poindexter, dry at 1,325 feet; Tannehill and others' No. 5 Myers, 10 bbls. at 1,008 feet.

Callahan County

Lowe, DeLaney & Carter's No. 1, Block 82, 66 bbls. at 1,425 feet; Nichols and others' No. 1 Davos, dry at 2,478 feet.

Mitchell County

California Co.'s No. 9 Abrams, 82 bbls. at 3,015 feet; No. 2 Butler, 37 bbls. at 3,000 feet; No. 1 Mo. State Life, 72 bbls. at 3,075 feet; No. 1 Miller, 147 bbls. at 3,068 feet; No. 1 Womack, 300 bbls. at 3,052 feet.

Coleman County

Duncan and others' No. 1 Gray, 10 bbls. at 2,458 feet.

Val Verde County

Reclamation O. P. Syndicate's No. 1 Moore, dry at 2,570 feet.

Hutchinson County, Drilling

American Refining Co.'s No. 1 Weatherly is drilling at 1,977 feet; McIlroy and others' No. 1 Smith, 600 feet; Panhandle Refining Co.'s No. 2 Perkins, 2,640 feet; No. 3 Perkins, 2,200 feet; Phillips and others' No. 2 Kingsland, 535 feet; Roxana Petroleum Co.'s No. 1 Smith, 2,125 feet; Tex-O Oil Co.'s

No. 1 Johnson, 2,100 feet; Twin Six Oil Co.'s No. 2 Kingsland, 2,137 feet.

Potter County

Amarillo Oil, Co.'s No. 4-A Bivins underreaming.

Carson County

American Refining Co.'s No. 1-C Burnett, drilling at 2,875 feet; No. 1-A Burnett, 1,875 feet; No. 1-E Burnett, cleaning out at 3,138 feet; Culberson Brothers' No. 1 Burnett, drilling at 1,150 feet; Magnolia Petroleum Co.'s No. 1 Burnett, 2,982 feet; Marland Oil Co.'s No. 3 Burnett, showing oil at 2,975 feet; No. 4 Burnett, drilling at 2,510 feet; The Texas Co.'s No. 6 Burnett, 2,926 feet; No. 3 M. C. Burnett, 2,911 feet.

Gray County

Anderson and others' No. 1 Beavers, drilling at 3,020 feet; Danciger Oil & Refining Co.'s No. 1 Bowers, 2,972 feet; Osborne and others' No. 1 Byrum, spudding.

Wheeler County

Midway Oil Co.'s No. 1 Williams and Laycock, drilling at 1,885 feet; Midwest Exploration Co.'s No. 1 Company, 430 feet; No. 1-A Williams and Laycock, spudding.

Collingsworth County

Continental Oil Co.'s No. 1 Hughes, drilling at 1,620 feet.

Cottle County

Woodley and others' No. 2 Dulaney, drilling at 800 feet.

King County

Hoffer Oil Corp.'s No. 1 Patton, drilling at 1,310 feet.

Garza County

Marland Oil Co.'s No. 1 Connell, drilling at 940 feet.

Shackelford County

Brannon and others' No. 4 Elliott, drilling at 1,315 feet; Conley and others' No. 1 Parrish, underreaming; Domestic Oil Co.'s No. 1 Colbert, drilling at 725 feet; Franch and others' No. 1 Dillar, underreaming; Gilliam and others' No. 1 Owens, 650 feet; Hayes and others' No. 1 Leschber, 200 feet; Hope Petroleum Co.'s No. 1 Newell, 500 feet; Humble Oil & Refining Co.'s No. 2 Elliott, 720 feet; No. 2 McLemore, 775 feet; No. 2 Palm, 400 feet; Mid-Kansas Oil & Gas Co.'s No. 1 Newell, spudding; Moutray Oil Co.'s No. 1 Snyder, spudding; McKamra and others' No. 1 Clausell, drilling at 2,230 feet; Phillips Petroleum Co.'s No. 1 Fry, fishing at 1,520 feet; No. 7 Parrish, drilling at 1,815 feet; No. 8 Parrish, spudding; Riley and others' No. 1 Elliott, drilling at 922 feet; Tannehill and others' No. 5 Myer, 1,102 feet; Taylor and others' No. 1 Fincher, showing oil at 915 feet.

Callahan County

Brannon and others' No. 1 Block 85, drilling at 300 feet; Bowden and others' No. 1 Coats, 620 feet; Canyon Oil & Gas Co.'s No. 2 Barr, 890 feet; Cranfill and others' No. 1 Block 27, 1,440 feet; No. 1 Block 90, spudding; French and others' No. 1 Hinds, drilling at 200 feet; Harris and others' No. 1 Block 25, setting casing at 1,405 feet; Lowe and others' No. 1 Block 76, drilling at 500 feet; Moore and others' No. 1 White, 309 feet; Neeb and others' No. 1 Block 10, 270 feet; Skinner and others' No. 1 Block 73, spudding; Slick and others' No. 1 Haley, drilling at 1,364 feet; Suddereth and others' No. 1 Thorn, 100 feet.

Mitchell County

Eastland Oil Co.'s No. 4 Keynard, drilling at 1,775; Henshaw and others' No. 1 Scott, 1,650 feet; Green and others' No. 1 Ellwood, spudding; California Co.'s No. 14 Morrison, drilling at 2,045 feet.

Howard County

Deep Rock Oil Co.'s No. 1 Scott, drilling at 710 feet; Marland Oil Co.'s No. 1 O'Daniel, 1,610 feet.

Culberson County

Gresham Brothers' No. 1 fee, drilling at 2,515 feet; California Co.'s No. 1 Gresham, fishing at 934 feet.

Midland County

Rook and others' No. 1 Hill, drilling at 3,015 feet.

Sterling County

Harty and others' No. 1 Reynolds, cleaning out at 270 feet; Wrightsman Petroleum Co.'s No. 1 Foster, drilling at 1,160 feet; No. 1 Hull, 2,825 feet.

LOWEST PRICES SINCE FEBRUARY EXCEPTING ON PACIFIC COAST

Sweeping reductions during August sent tank wagon prices over the United States tumbling, and, on September 1, the average price in 50 representative cities of the country was lower than at any time since February 1, according to the monthly review of The Oil and Gas Journal.

So general were the reductions that every section of the country except the Pacific Coast suffered drastic cuts in tank wagon postings. Virtually every district received at least one cut and in many points postings were slished three or four times.

The price cutting began early in the month in the Standard Oil Co. of New Jersey territory. This was followed immediately by the Standard Oil Co. of Louisiana. Then, in rapid succession throughout the month one general reduction followed another, spreading from the east and south to the central west and Rocky Mountain States. Reductions during the month ranged from 1 cent to 6 cents in some areas.

The reductions by Standard companies were made necessary by competition and reflect emphatically, rapidly declining refinery gasoline prices. Overproduction and large stocks of gasoline forced large quantities of the distress product on the market at cheap tank car prices enabling independent distributors to carry on price wars in nearly every part of the country.

The reductions during August followed a period of steadily advancing prices since May 1. But, although the peak was reached August 1, "signs of the times" were in evidence throughout July when tank wagon prices were unusually quiet being marked only by a few scattered increases due to local conditions.

According to The Oil and Gas Journal's review, the average tank wagon price in the 50 representative cities of the country September 1, was 16,763 cents, the lowest since February 1 when the average was 16.74 cents, and lacking only 0.023 cents of reaching the latter low mark. The average September 1 was a decrease of 2,650 cents from the average August 1 of 19.414 cents, which was the record high mark of the year.

Muncipal and State owned service stations played their role in forcing prices down in some places but these instances were comparatively few and acted only indirectly. In cities where these stations operated, reductions were almost confined to service stations, tank wagon postings being unchanged because of this competition. In many cases the service station prices were below the tank wagon schedule.

As has been the case for many months, the average gasoline tax of the 50 cities showed an increase September 1 over the preceding month. On September 1 the average was 2.33 cents while that on August 1 was 2.25. The increase September 1 was due to an advance in the Connecticut and North Dakota taxes from 1 to 2 cents.

MEXICO'S OIL REVENUE

Alexander V. Dye, Commercial Attache of the United States Embassy, has prepared an analysis of the taxes paid in Mexico by oil companies. The revenue from petroleum taxes alone is estimated at 64,000,000 pesos ($32,000,000) in 1923, or more than one-fourth of the entire income of the Government. American oil companies are estimated to have paid about 44,000,000 pesos, ($22,000,000).

GASOLINE PRICES EFFECTIVE ON SEPTEMBER 1, 1925

Table showing gasoline tank wagon prices as of September 1, 1925, exclusive of taxes in fifty representative cities, including the amount and date of changes since July 1, 1925. High and low prices and State taxes also given.

	July 1	Changes since July 1	Aug. 1 Prices	August Changes	Sept. 1 Changes	Sept. 1 Prices	High and Low Prices 1924		High and Low Prices 1923		Taxes Sept. 1
Birmingham, Ala.	20 0	....	20 0	.... 21 19 0	27 18 0	....	18 0	20 0	13 0	20 0	14.0	2.0
Phoenix, Ariz.	20 0	....	20.0	....	....	....	20.0	20 0	16 0	22 5	17 5	3.0
Little Rock, Ark.	19 0	....	19 0	8 14 19 18 0 15.5 14.0	27 .... 13.5	....	13.5	18.0	13.0	20.5	12.5	4.0
San Francisco, Cal.	15 0	....	15 0	....	....	....	15 0	15.0	11 0	19 0	12 0	2.0
Denver, Colo.	19 0	.... 20 20.2	20 0	....	26 18 0	....	18 0	19.0	12 0	20 0	11 0	2.0
Hartford, Conn.	21 0	....	21.0	10 20 0	27 16 0	....	16.0	20 0	13 0	24 5	15 5	3.0
Dover, Del.	21 0	....	21 0	10 20.0 .... 17 19.0	27 18 0	....	18 0	20 0	14 0	23 0	14 0	2.0
Jacksonville, Fla.	19 0	....	19 0	.... 21 18 0	27 17 0	....	17.0	19.0	12 0	20 0	13 0	4.0
Atlanta, Ga.	21 0	....	21 0	11 18.0	....	....	18 0	19 0	11 0	22 0	13 0	3 0
Boise, Idaho	21 5	....	21 5	....	....	....	21 5	22 5	18 5	24 0	18 0	3.0
Peoria, Ill.	18 2	14 28 19 2 14 0	14 0	....	25 13 0	....	13 0	18 2	13 0	20 8	12.2	...
Chicago, Ill.	17 0	14 18 0	18 0	....	25 16 0	15 0	15 0	18 0	13 0	20 0	12 0	...
Indianapolis, Ind.	18 2	14 19 2	19 2	....	25 17 2	16 2	16 2	18 2	13 2	20 8	12.2	3.0
Des Moines, Iowa	18 5	14 28 19 5 17 5	17 5	....	....	15 5	15 5	18 5	13 5	21 1	12 5	2 0
Wichita, Kans.	17 8	14 18 8	18 8	....	25 16 8	16.8	16.8	17.8	12.8	20.4	11.8	2.0
Louisville, Ky.	19 0	....	19 0	.... 21 18 0	27 17 0	....	17.0	19 0	12 0	21 0	13 0	3 0
New Orleans, La.	14 5	....	14 5	.... 14 13 5	27 13 0 ...	....	13 0	16 5	11 5	19 5	10.5	3 0
August, Maine	22 0	....	22 0	10 20 0 .... 17 18 0	....	....	18 0	19 0	13 0	24 5	15 5	3 0
Baltimore, Md.	19 0	....	19 0	8 14 18 0 17 0	25 20 16 5 26 16 0	....	16.0	19 0	13 0	22 5	15 0	2.0
Springfield, Mass.	21 0	....	21 0	10 20 0	27 16.0	....	16.0	20 0	13 0	24 5	14 5	...
Detroit, Mich.	18 8	14 19 8	19 8	....	25 17 8	16 8	16 8	18 8	13 8	21.8	13 2	2.0
Duluth, Minn.	19 5	14 20 5	20 5	....	25 18 5	17.5	17.5	19 2	14 5	21 5	12 9	2.0
Natchez, Miss.	18 5	....	18 5	.... 21 17.5	27 16 5	....	16 5	18 5	11 5	20 0	12.5	3.0
Kansas City, Mo.	17 9	14 18 9	18 9	....	25 16 9	14.9	14.9	17 9	11 9	19 5	10 9	3.0
Helena, Mont.	23 0	21 .... 24.0	24 0	....	25 22.0	....	22.0	23 0	18 0	23 5	18.0	2.0
Omaha, Neb.	18 25	15 19 25	19 25	.... 14 17.5 .... 20 17 25	....	....	17 25	18 25	11.0	20 5	12 25	2 0
Reno, Nev.	18 5	....	18 5	....	....	....	18 5	18 5	14 5	22.5	15.5	4.0
Newark, N. J.	19 0	....	19 0	8 14 18.0 17.0	20 25 16 5 16.0	....	16.0	19 5	13 5	23 5	15.5	...
Albuquerque, N. M.	23 5	....	23 5	....	27 22 5 21 5	....	21 5	23 0	18 0	25 5	17 0	3.0
New York, N. Y.	22 0	....	22 0	10 20 0	26 .... 17.0	....	17.0	20 0	14 0	24 5	15 5	...
Charlotte, N. C.	20 0	....	20 0	8 14 19.0 18.0	25 20 17 5 17.0	...	17 0	19.0	12 0	21 5	15 0	4.0
Fargo, N. D.	19 9	14 20 9	20 9	....	25 19.9	18.9	18.9	19.6	14.9	24.3	13.8	3.0
Cleveland, Ohio	18 5	....	18 5	....	29 17.0	....	17.0	20.0	15.0	21 0	16 0	2.0
Tulsa, Okla.	18 0	....	18 0	4 16 0	....	....	16 0	18.0	9 5	20 0	8 0	3.0
Portland, Ore.	15 0	....	15 0	....	27	....	15.0	16 0	12 0	20 0	13 0	3.0
Philadelphia, Pa.	21 0	....	21 0	10 20 0 .... 17 19 0	27 18 0	....	18 0	20.0	14 0	23 0	14 0	...
Providence, R. I.	22 0	....	22 0	10 20 0 .... 17 18 0	26 16 0	....	16 0	20 0	13.0	24 5	15 5	1.0
Charleston, S. C.	20 5	....	20 5	8 14 19 5 18 5 .... 20 17 5	25 17 0	....	17 0	19 0	12 5	22 0	15 0	5.0
Huron, S. D.	19 0	14 20 0	20 0	5 8 18 5 17 0	....	14.5	14.5	20.0	15.0	22.6	14.0	3.0
Memphis, Tenn.	16 0	....	16 0	8 14 19 15.0 16.5 15 0	....	....	15 0	18 0	12 0	20 0	12 0	3.0
Dallas, Tex.	18.0	....	18 0	....	27 16.0	....	16.0	17.0	9.0	19.0	6.0	1.0
Salt Lake City, Utah	20 5	.... 21 21 5	21 5	....	26 20 5	....	20 5	21 5	16 5	23 0	15 5	3.5
Burlington, Vt.	22.0	....	22 0	10 20 0 .... 17 18 0	....	....	18 0	20 0	13 0	24 5	15.5	2.0
Norfolk, Va.	20 0	....	20 0	8 14 19 0 18 0 .... 20 17 5	25 17 0	....	17 0	19 0	14 5	21 5	15 0	3.0
Washington, D. C.	19 0	....	19 0	8 14 18 0 17 0 .... 20 16 5	25 16 0	....	16 0	19 0	14.0	23 0	15 0	2 0
Charleston, W. Va.	19 0	....	19 0	8 14 18 0 17 5	25 16 5	....	16 5	19 0	14 0	23 0	15 0	3 5
Milwaukee, Wis.	18 1	14 19.1	19 1	....	25 15 1	....	15 1	18 1	13 1	19 6	13 0	2.0
Casper, Wyo.	19 0	.... 20 20 0	20 0	....	26 18 0	....	18.0	19 0	14 0	18 0	13 0	2.5
Seattle, Wash.	15 0	....	15 0	....	....	....	15.0	16.0	12.0	20.0	13.0	2.0
Minneapolis, Minn.	19 2	14 20 2	20 2	....	25 18 2	....	18 2	18 9	12 0	....		2 0
Average price	19.387	....	19 413	....	....	.....	16.763	18.99	13.27	21.71	13.65	2.33

ANOTHER DECREASE IN REFINERY RUNS

(Continued from Page 23)

ing in the Mid-Continent September 1. This was an increase of one plant over figures of August 1. This increase was made despite the fact that five plants listed as operating August 1 were shut down September 1. The plants which shut down were offset by six plants being reported operating September 1, which were not reported as such August 1.

As usual, runs to stills September 1 were far in excess of runs reported on September 1 last year. The increase this month was 59,565 bbls., placing the total runs to stills on September 1, a year ago, at 348,125 bbls. in contrast to the 407,690 bbls. September 1, 1925. During the year there was an increase of six in the total number of plants and eight in the operating refineries.

MID-CONTINENT REFINING OPERATIONS
Table No. 1
(Based on plants which have been in operation the past year.)

	No. Plants Sept. 1	Capacity Sept. 1	Plants Operating Sept. 1	Daily Runs Sept. 1
Oklahoma	61	278,000	53	185,525
North Central Texas	49	177,950	40	92,335
*Kansas	26	125,900	21	87,600
North Louisiana	7	39,300	5	26,400
Arkansas	14	35,700	8	15,830
Total	157	650,850	127	407,690

*Includes two Missouri plants.

Table No. 2
(Based on operations of all plants as of September 1, 1925, and August 1, 1925. Capacities include all plants regardless of how long they have been shut down.)

	No. Plants Sept. 1	Capacity Sept. 1	Plants Oper. Sept. 1	Daily Runs Sept. 1	Plants Oper. Aug. 1	Daily Runs Aug. 1	Daily Decrease Sept. 1
Oklahoma	108	381,000	53	185,525	53	190,250	4,725
North Central Texas	80	255,100	40	92,335	37	91,152	21,183
*Kansas	41	156,500	21	27,600	21	94,500	6,900
North Louisiana	17	52,580	5	26,400	6	34,900	8,500
Arkansas	16	45,450	8	15,830	9	16,580	750
Total	262	890,630	127	407,690	126	427,382	19,692

*Includes four Missouri plants. ‡Increase.

Table No. 3
(Based on operations of plants, September 1, 1925, and September 1, 1924.)

	No. Plants Sept. 1, 1924	Cap'y Plants Sept. 1, 1924	Op. Da. Runs Sept. 1, 1924	Da. Runs Sept. 1, 1925	Da. Inc. Sept. 1, 1925
Oklahoma	59	256,500	47	149,000	36,525
North Central Texas	43	163,250	36	88,650	3,685
*Kansas	28	126,800	21	69,075	18,525
North Louisiana	6	33,500	6	27,300	‡900
Arkansas	15	39,950	9	14,100	1,730
Total	151	620,000	119	348,125	59,565

*Includes four Missouri plants. ‡Decrease.

REFINING OPERATIONS IN OKLAHOMA
(Plants which have been in operation during the past year.)

Name and Location—	Daily Capacity	Runs Sept. 1	Runs August 1
Anderson-Prichard, Cyril	1,200	900	900
Barnsdall Refining Co., Barnsdall	5,000	4,000	4,500
Bell Oil & Gas Co., Grandfield	3,000	1,200	1,200
Bolene Refining Co., Enid	5,000	3,500	3,500
Cameron Refining Co., Ardmore	3,900	2,300	3,600
Canfield Refining Co., Yale	500	150	50
Chestnut & Smith Corp., Sand Springs	5,000	Shut down	Shut down
Champlin Refining Co., Enid	16,000	16,000	16,000
Coleman-Nelson Corp., West Tulsa	2,000	600	600
Continental Oil Co., Sapulpa	7,000	3,000	2,000
Cushing Refining & Gasoline Co., Cushing	2,500	700	700
Cushing Refining & Gasoline Co., Blackwell	1,500	1,000	1,000
Daisy Bell Petroleum Co., Wilson	2,000	200	Shut down
Empire Refineries Inc., Cushing	7,000	5,000	5,000
Empire Refineries, Inc., Okmulgee	3,000	3,000	3,000
Empire Refinerier, Inc., Ponca City	6,500	6,000	6,000
Fairmount Refining Co., Fairmount	2,500	1,800	1,800
Garber Refining Co. (Omar)	3,000	1,000	1,200
Gilmer Oil Co., Ringling	1,000	550	550
Globe Oil & Refining Co., Blackwell	5,000	4,500	4,500
Hewitt Refining Co., Hewitt	1,800	700	700
Illinois Oil Co., Cushing	3,000	1,700	1,700
Imperial Refining Co., Ardmore	6,000	4,100	4,500
Independent Oil & Gas Co., (Allied), Okmulgee	1,800	450	1,200
Johnson Oil Refining Co., Cleveland	4,000	3,800	3,800
Lawton Refining Co., Lawton	1,000	75	Shut down
Lorraine Refining Co., Bristow	4,000	2,000	2,800
Marland Refining Co., Ponca City	20,000	20,000	20,000
Mid-Continent Petroleum Co. (Cosden), West Tulsa	35,000	26,000	26,000
Newkirk Oil & Refining Co., Newkirk	2,000	Shut down	Shut down
Nyanza Refining Co., Wilson	3,500	Shut down	800
Oil State Refining Co., Enid	2,000	1,700	1,700
Okla-Tex. Refining Co. (Sagamore), Grandfield	2,000	1,500	1,500
Phillips Co. (Waite), Okmulgee	6,000	5,000	5,000
Peppers Gasoline Co., Covington	1,000	900	900
Pierce Oil Corp., Sand Springs	10,000	7,800	8,000
Producers & Refiners Corp., West Tulsa	7,000	5,500	5,500
Producers & Refiners Corp., Blackwell	8,000	Shut Down	1,500
Pure Oil Co., Ardmore	6,500	1,800	2,100
Pure Oil Co. Cushing	5,000	3,000	3,000
Pure Oil Co., Muskogee (O. P. & R. Co.)	2,500	1,800	2,000
Red Star Refining Co. Oklahoma City	2,500	200	400
Riley Petroleum Co., Bristow	800	700	700
Rock Island Refining & Pipe Line Co., Duncan	2,500	2,200	2,200
Roland Oil Co., Bristow	1,500	700	700
Sayre Oil & Refining Co., Sayre	500	100	100
Shaffer Oil & Refining Co., Cushing	8,000	6,500	6,500
Sun Co., Yale	3,000	2,700	2,100
Sinclair Refining Co., Cushing	6,000	Shut down	Shut down
Sinclair Refining Co., Muskogee	1,000	700	700
The Texas Co., West Tulsa	10,000	10,000	10,000
Texas Pacific Coal & Oil Co., Wynnewood	2,500	1,900	2,000
Tidal Refining Co., Drumright	6,000	6,000	6,000
Transcontinental Oil Co., Boynton	2,500	2,500	2,500
Transcontinental Oil Co., Bristow	6,000	5,000	5,000
Tonkawa Petroleum Co., Tonkawa	2,500	700	700
Turley Refining Co. (formerly Home Petroleum Co.), Oklahoma City	2,500	Shut down	Shut down
Whalebeck Production Co., Oklahoma City	1,500	Shut down	Shut down
Western Oil Corp., Beckett	1,500	1,200	1,200
Yale Oil Corp., Yale	1,500	800	650
Yale Asphalt Co., Yale	1,000	Shut down	Shut down
Total	273,400	185,525	190,250

REFINING OPERATIONS IN NORTH CENTRAL TEXAS
(Plants which have been in operation during the past year.)

Name and Location—	Daily Capacity	Runs Sept. 1	Runs August 1
‡Amarillo Refining Co., Amarillo	2,000	2,200	2,250
American Refining Co., Wichita Falls	7,000	5,400	5,600
Big Four Refining Co., Panhandle	1,500	1,000	1,000
Boardman Oil Co., Wichita Falls	750	Shut down	Shut down
Bridgeport Refining Co. Bridgeport	1,000	70	60
Buffalo Refining Co., Sherman	500	200	200
Crystal Petroleum Co., Burkburnett	1,000	250	300
Dale Oil & Refining Co. (Griswold), Electra	2,000	1,000	Shut down
De Leon Refining & Pipe Line Co., De Leon	1,500	Shut down	700
Falls Refining Co., Wichita Falls	1,500	650	650
Four States Refining Co. Texarkana	750	Shut down	Shut down
Gulf Refining Co., Fort Worth	15,000	6,400	6,400
Hagaman Refining Co., Griffin	2,000	275	275
Humble Oil & Refining Co., Burkburnett	2,300	2,300	2,300
Humble Oil & Refining Co., Hearne	10,000	9,000	9,000
Iowa Park Producing & Refining Co., Iowa Park	2,500	1,000	1,850
Kent-Middleton Refining Co., Corsicana	2,500	1,200	1,200
Miller Petrolem Co., Wichita Falls	3,000	1,800	1,900
Magnolia Petroleum Co., Fort Worth	12,000	6,700	6,700
Magnolia Petroleum Co., Corsicana	10,000	2,700	2,600
Megargel Refining Co., Megargel	2,000	840	500
Mexia Oil & Refining Co. Mexia	600	Shut down	Shut down
National Refining Co., Texas, Greenville	2,600	Shut down	Shut down
Noble Oil & Gas Co. Burkburnett	5,000	2,700	2,700
Olney Oil & Refining Co., Olney	1,000	700	950
Oriental Refining Co., Dallas	6,000	300	300
*Oriental Refining Co. (Trinity) Dallas	5,000	3,000	3,200
Orient Petroleum Co., Wichita Falls	2,000	1,400	1,500
Paris Refining Co., Paris	250	250	250
Panhandle Refining Co., Wichita Falls	4,000	3,500	3,000
Peerless Refining Co., Wortham	400	350	.....
The Petroleum Corp., Electra	2,000	600	500
Primrose Refining Co., Wichita Falls	1,500	Shut down	Shut down
Producers Refining Co., Gainesville	5,000	4,000	4,200
Simms Oil Co. (Clayton), Dallas	4,500	3,750	3,900
Star Refining & Producing Co., Fort Worth	1,500	Shut down	Shut down
State Refining Co., Dallas	1,000	Shut down	Shut down
Sunshine Consolidated Oil Co., Wichita Falls	2,500	1,750	1,900
Sweetwater Refining Co., Sweetwater	500	100	50
Tidal Western Refining Co., Burkburnett	3,000	2,000	1,800
The Texas Co., Dallas	15,000	9,700	9,700
Texhoma Oil & Refining Co., Wichita Falls	7,000	4,450	5,167
Tiger Refining Co., Breckenridge	1,500	100	100
Transcontinental Oil Co., Fort Worth	5,000	2,500	2,500
Travis Refining Co., Burkburnett	1,000	Shut down	Shut down
Waggoner Refining Co., Electra	3,400	2,500	2,500
West Texas Refining & Development Co., Colorado	1,500	1,000	.....
White Eagle Oil & Refining Co., Fort Worth	5,000	3,000	3,500
Wilson Brothers Refining Co. (Wichita Refinery), Wichita Falls	2,500	700	Shut Down
Total	170,050	92,335	91,152

*Operated by Magnolia Petroleum Co. ‡Runs to be increased to 5,000 bbls. Sept. 10.

REFINING OPERATIONS IN KANSAS
(Plants which have been in operation during the past year.)

Name and Location—	Daily Capacity	Runs Sept. 1	Runs August 1
Arkansas City Refining Co., Arkansas City	5,000	4,000	5,000
Commonwealth Oil & Refining Co., Moran	1,800	150	150
Derby Oil & Refining Co., Wichita	5,000	4,900	4,950
El Dorado Refining Co., El Dorado	3,500	2,500	3,000
Golden Rule Refining Co., Wichita	1,000	1,000	1,000
Grant Oil Co. Augusta	1,500	Rerun	Rerun
Kanotex Refining Co., Arkansas City	9,000	7,800	7,800
Kansas Oil Refining Co., Coffeyville	2,000	Shut down	Shut down
Kansas City Refining Co., Kansas City	5,000	4,700	4,800
Miller Petroleum Co., Humboldt	2,000	1,100	1,200
National Asphalt & Road Oil Co., Kansas City	400	100	200
National Refining Co., Coffeyville	6,000	6,000	6,000
Peerless Oil Refining Co., Chanute	3,000	2,200	2,200
Red Bird Refining Co., Fredonia	200	Shut down	Shut down
Richardson Refining Co., El Dorado	1,500	Shut down	Shut down
Poxana Petroleum Corp., Arkansas City	15,000	14,500	14,500
Sinclair Refining Co., Coffeyville	6,500	6,100	6,100
Sinclair Refining Co., Argentine	8,000	4,000	4,000
Skelly Oil Co., El Dorado	14,000	12,000	12,000
Standard Oil Co., of Kansas, Neodesha	12,000	4,850	9,200
United Oil & Refining Co., Hutchinson	2,500	300	300
Vickers Petroleum Co. Potwin	3,500	2,800	2,900
Waite Phillips Co., Wichita	5,000	3,000	3,500
White Eagle Oil & Refining Co., Augusta	6,500	5,000	5,000
Southern Missouri Group—			
Interstate Refining Co., Centropolis	1,500	Rerun	Rerun
Wilhoit Refining Co., Joplin	1,500	600	600
Total	125,800	87,600	94,500

REFINING OPERATIONS IN NORTH LOUISIANA
(Plants which have been in operation during the past year.)

Name and Location—	Daily Capacity	Runs Sept. 1	Runs August 1
Caddo Central Oil & Refining Co., Shreveport	3,500	2,000	3,000
Caddo Central Oil & Refining Co., Shreveport	4,500	3,500	5,000
Great Southern Refining Co., Ardis	2,000	Shut down	1,000
Louisiana Oil Refining Corp., Shreveport and Bossier	15,000	13,000	15,000
Red River Refining Co., Trichon	1,800	Shut down	Shut down
Shreveport Producing & Refining Co., Shreveport	5,500	4,900	4,900
*The Texas Co., Ardis	7,000	6,000	6,000
Total	39,300	26,400	34,900

*Topping.

REFINING OPERATIONS IN ARKANSAS
(Plants which have been in operation during the past year.)

Name and Location—	Daily Capacity	Runs Sept. 1	Runs August 1
Cross Refining Co., Smackover	2,000	1,000	1,500
Farmers Oil & Refining Co., Texarkana	750	Shut down	Shut down
Grison Refining Co., Eldorado	750	Shut down	Shut down
Home Refining Co., Camden	500	100	100
Home Oil & Refining Co., Hot Springs	500	100	100
Houston Oil Co., Camden	5,000	1,500	1,500
Kettle Creek Refining Co., Pearson	4,000	3,000	3,500
Lion Oil & Refining Co., Eldorado	10,000	7,800	7,000
McMillan, Fehlman & Oliver, Eldorado	1,500	Shut down	200
Ouachita Valley Refining Co., Eldorado	1,500	850	680
Pine Bluff Refining Co., Pine Bluff	2,000	Shut down	Shut down
Pool Refinerier, Eldorado	2,500	1,480	2,000
Shippers Petroleum Co., Eldorado	700	Shut down	Shut down
Union Pipe Line & Refining Co., Eldorado	4,000	Rerun	Rerun
Total	35,700	15,830	16,580

REFINED MARKET SHOWS BETTER TONE

(Continued from Page 20.)

The latest Government report covering July, however, is not particularly favorable as it showed gasoline stocks were reduced only approximately 85,000,000 gallons during the month, leaving total stocks August 1 of approximately 1,610,000,000 gallons, an extremely large amount for that time of year. But August consumption demands may have reduced that amount to a considerable extent.

Gasoline and Naphtha

As has been mentioned, a better tone is apparent in Group 3 gasoline conditions. Oklahoma refiners shipped an unusually large amount of gasoline the past week and many inquiries still are being received. However, many of the orders Tuesday were accumulations over the week-end and Labor Day. U. S. Motor (58-60, 437) gasoline sold Tuesday at 8¼ to 8½ cents. A few purchases were made at lower prices but to insure positive prompt shipment buyers were forced to pay 8¼ cents and in some cases more with the bulk of the purchases tending toward 8½ cents. The 56-58, 450 gasoline was still obtainable as low as 7¾ cents but the product was not as free at that figure as earlier in the week.

Higher gravity gasolines, however, were comparatively inactive in Oklahoma although the product was fairly tight to some buyers. Recent export orders have helped to check rapid declines in these grades. The 60-62, 490 gasoline was obtainable Tuesday at 10 cents and a few purchases were made under that price. The 64-66, 365 gasoline was quoted at 11 to 11¼ cents although some buyers reported purchases at 10¾ cents.

Kerosene and Distillates

Kerosene, perhaps the strongest point in the entire Group 3 market. Tuesday was virtually unobtainable and when found was bought only at a premium. Many refiners have quit making 42-44 water white which may account for its high quotation of 5 to 5¼ cents. Even the 41-43 grade was scarce at 4¾ cents, although a few buyers said they could obtain some as low as 4½ cents. Distillates the past week were comparatively inactive but Tuesday they still were firm

(Continued on Page 151)

EXAMINER PROPOSES IMPORTANT CHANGES

(Continued from Page 138)

groupings were denied. In his report the examiner took the position that the present grouping "represents the natural evolution of the petroleum producing and refining industries," and "are not the result of arbitrary carrier action." He concluded his report on this phase of his investigation by declaring the present groups "are better evidence of what a proper group arrangement in general should be than much of the speculative reasoning which has here been advanced. Large investments have been made in the Mid-Continent Field in reliance upon the expected permanency of the present groups. Serious rate disturbances such as those which would result from the proposed group changes, particularly in Oklahoma and Kansas, would place in jeopardy many of these investments and be destructive of property values." This phase of the examiner's report, if it be sustained by the commission, is considered of special importance, as it indicates whatever changes are made in rates in the future the original groups are not to be changed.

Part of the contentions of the Group 1 and 2 refiners were allowed. Not, however, by reducing rates in these groups and leaving the others unchanged as was suggested by the refiners in the Kansas City and Kansas areas, but rather by leaving the Groups 1 and 2 rates unchanged and advancing the rates in groups to the south.

The following table gives a few of the proposed changes:

		Rates	Differentials Under Group 3	
To	From	Group 3	Group 2	Group 1
Kansas City		24		6½
Des Moines		33	9	3½
Omaha		33½	9½	4
Chicago		38	5½	2
Duluth		49	8	2

San Antonio is placed on the same basis as South Texas. New Orleans is given a 1½-cent differential over Group 3 to St. Louis, Chicago and intermediate points.

It will be noted that under the proposed changes the rate to Chicago and other eastern points of the destination territory concerned, from Group 3, would be increased 2 cents. At the same time New Orleans, which has the same rate to Chicago as Group 3, would have its rate increased to 39½ cents. No changes were made in the rates from Group 3 to points west of the river, as is shown in the above table.

In regard to the Ranger district, the examiner held that rates should not exceed those from North Texas by more than 1.5 cents. The present differential of 2½ cents between North Texas and Group 3 was not changed.

To St. Louis and points beyond the river, the examiner held that the Shreveport-El Dorado rates should not exceed those of Group 3, with no change in the present differential of 2.5 cents under the South Texas groups.

In connection with these changes the examiner said they are not to be understood as "authorizing any increases in the rates from Group 3 to points in North and South Dakota, in Mnnnesota beyond St. Paul, and in the northern peninsula of Michigan, to which rates from Groups 2 and 3 are now the same, in establishing the prescribed differentials of Groups 1 and 2 under Group 3."

Fuel Oil Rates

The examiner held that the present method of having an arbitrary differential under the gasoline rate for fuel oil and other low grade products did not properly reflect principles of rate progression and relationship, and suggested that a much fairer basis would be to establish a maximum rate of 80 per cent of the gasoline rate to the same points.

"That basis," the examiner points out," would produce maximum rates from Group 3 of 25 cents to St. Louis and 30.5 cents to Chicago. Those rates would be 1 cent higher than the present rates, but would produce differences under the gasoline rates 1 cent greater in each instance than the present differentials. The difference in Kansas City would be 5 cents and St. Paul 9 cents. The difference at points beyond Kansas City would generally grade upward from the present unusal differential of 6.5 cents."

NATURAL GASOLINE CONTROL CENTRALIZED

(Continued from Page 30)

Many other changes have been made the past year in ownership of natural gasoline plants nearly all of which have resulted in smaller companies being merged with the ever growing larger companies. Skelly Oil Co. of Tulsa and Empire Gasoline Co. of Bartlesville both have extended their operations materially. The Empire now is building a 6 000- gallon absorption plant at Wellington, Kan.

On the Pacific Coast, the Pacific Gasoline Co. has taken over a number of smaller companies and has enlarged some of the plants it originally owned. Among the companies taken over and now being operated by the Pacific Gasoline Co. is the Sonada Gasoline Co. with a 5,000-gallon plant at Santa Fe.

In the East, the Hope Construction & Refining Co. stands out as a leader in extending operations. This company continually is acquiring new plants. Among the plants purchased by this company were those of the Peoples Natural Gas Co. of Pittsburgh. Included in this company's natural gasoline production as listed in the accompanying table is that of the Reserve Gas Co. as the two companies are closely associated.

The Carter Oil Co. of Tulsa, a sister

Differentials Over Group 3				
North Texas	Ranger	Shreveport El Dorado	South Texas
5½	7	2½	5
2½	4	2½	5
2½	4	2½	5
2½	4		2½
2½	4		

of the Hope Construction & Refining Co., is increasing its natural gasoline production by building a 30 000-gallon absorption plant in the Cromwell pool to augment another plant already in operation. In addition to its Oklahoma production, the Carter Oil Co. has a modern absorption plant in Wyoming with 10,000 gallons capacity.

The Gilliland Oil Co., another of the leading 33 companies of the country, is putting into operation a new absorption plant at Louann, Ark., with a total capacity of 12,000 gallons daily. Magnolia Petroleum Co. is building a modern plant in the Davenport, Okla., oil field, as is the Victor Gasoline Co., Tulsa. Included in the Magnolia's natural gasoline output in the table is that of the Fortuna Oil Co.

New California Plants

Two large California companies, the General Petroleum Corp. and the Standard Oil Co., are increasing their gasoline production with new plants. The former is erecting a 15,000-gallon absorption plant at Ventura, and the latter a 5,000 combination plant at Richfield. Although not among the 33 largest companies,the Export Refiining Co. of California has taken over the Los Angeles Gasoline Corp. and is operating the latter's 8 000-gallon plant at Torrance. The Hanlon Gasoline has purchased the Hipower Gasoline Co., formerly the Mystic Gasoline Co.

The Signal Gasoline Co., Inc., of Los Angeles, Cal., with approximately 19,000 gallons daily capacity in that State, is extending its operations to the Mid-Continent by erecting a 4,000-gallon absorption plant at Bristow, Okla. This plant is being built and will be run by the Gilmore Oil Co. of Tulsa.

Many other changes have been made in natural gasoline plant ownership the past year and a number of other new plants are being built. all too numerous to mention individually, but will all show that the trend of natural gasoline plant operations is gradually toward more centralized control. The accompanying table shows the capacities of the 33 largest producers of natural gasoline in the order of their size.

ROCKY MOUNTAIN AREA

(Continued from Page 52)

Casper. In this way the Continental's crude from Salt Creek is delivered to tankage at Glenrock. The Continental's production in Sunburst Field is also carried by the Illinois Pipe Line Co., and in Artesia, N. Mex., the Continental acquired a pipe line through taking over an interest in the Flynn, Welch & Yates Syndicate, so that the Continental uses its own line for the shipment of crude.

The sale of property held at Parco, Wyo., during the official opening has reached the sum of $100,000. This is the amount realized so far for the town properties owned by the Producers & Refiners Corp. and sold to private individuals and business firms.

Salt Creek Wildcat

In the Salt Creek Field, the Marland Oil Co. is drilling what may be regarded as a wildcat well on the west side of the field. According to all the dope, this well should be a duster, for the concentrates in the water are all on the east side of Salt Creek structure and the strata dip steeply on the weste side where the Marland's location is. The well is located on the north half of Section 11-40-80 and within a short distance of the Kaycee road; the nearest production is some shale wells about a mile east. If the Marland finds production there it will cause great excitement for the area has long been condemned by other companies as worthless.

The new producer of the Midwest in the Lakota sand on Section 26-40-79 is making 4,500 bbls. daily and is the largest well so far found in that sand. This is the fifth well to reach the Lakota in Salt Creek and finally proves that the sand is not lenticular and that the pool is not a small one of the pocket kind.

The Midwest Refining Co. completed 13 wells in the Salt Creek Field the past week, all producers. The Midwest Oil Co. found a 40-bbl. well on Section 35-40-79 at 1,100 feet, and another on the same section that started off at 20 bbls. from a depth of 1,146 feet. One on Section 25-40-79 started off at 40 bbls. at 1,580 feet, and the Midwest Oil and Wyoming Associated, operating jointly on the School Section 36-40-79, found two pumpers at 1,705 and 1,635 feet, respectively.

The Wyoming Associated has a 35-bbl. well on Section 25-40-79 at 1,120 feet, and the same company has a 60-bbl. well on Section 30-40-78 in the second Wall Creek sand at 2,047 feet. On Section 13-40-79, this firm has a producer in the second Wall Creek sand good for 15 bbls. at 2,014 feet, and a pumper on Section 22-40-79 at 1,777 feet. On the same section the same company completed a small well at 1,610 feet that will be shot. The same company has a completion on Section 30-40-78 in the second Wall Creek sand that will make a small well at 2,135 feet.

The Salt Creek Consolidated Oil Co. has a small producer of about 15 bbls. on Section 3-39-79 at 1,935 feet, and another in the second Wall Creek sand at 2,044 feet that will make a 20-bbl. well.

The Continental Oil Co. has a gasser on Section 2-39-79 good for 2,500,000 feet in the second Wall Creek sand. This well is an oddity, as it the the first well ever drilled in the field that has no oil with the gas.

Field Runs for the Week

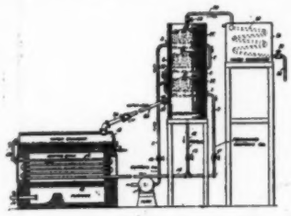
Salt Creek	63,515
Teapot	1,590
Big Muddy	3,420
Grass Creek	3,740
Elk Basin	860
Greybull	30
Rock Creek	2,960
Notches	400
Lance Creek	680
Poison Spider	960
Osage	340
Hamilton Dome	630
Mule Creek	690
Lander	300
Byron	50
Pilot Butte	300
Lost Soldier	5,470
Ferris	110
Cat Creek	3,400
Sunburst	11,500
Florence	260
Moffat	2,400
Fort Collins	1,330
Tow Creek	120
Boulder	25
Rangeley	100
Hogback	540
Rattlesnake	420
Artesia	3,000
Total	109,150

RECENT PATENTS

(Continued from Page 139)

cation filed January 26, 1925. Serial No. 4,641. Three claims (Cl. 196—58.)

A process for converting oil, comprising passing a restricted stream of oil through a heating tube where said oil is heated to a cracking temperature, in transferring the highly heated oil to an enlarger zone where conversion occurs, in passing vapors generated from the oil to a dephlegmator, in introducing charging oil to the dephlegmator to pass therethrough while in indirect heat conductive relation with the vapors to be maintained out of physical contact with the vapors and to assist in condensing the insufficiently cracked vapors, undergoing dephlegmation, in collecting the condensate



in pools to the dephlegmator through each of which pools the vapors must percolate and with which condensate said preheated charging oil is not permitted to physically commingle in the dephlegmator, in preventing the return of unvaporized residue from the enlarged zone to the heating tube, in passing reflux condensate and preheated charging oil from the dephlegmator to the inlet side of the heating tube to travel therethrough for treatment, and in maintaining a superatmospheric pressure on the oil undergoing conversion.

REFINED MARKET SHOWS BETTER TONE

(Continued from page 150)

in view of heavy winter demands, for which refiners are holding the product.

Natural Gasolines and Blends

One of the puzzles of the Group 3 markets the past few weeks has been the remarkable resistance of natural gasolines to weakening despite the soft straight run markets. This strength was particularly conspicuous Tuesday when naturals were at a premium with 11½ cents apparently the absolute low for immediate delivery. The demand for all grades of naturals has held up mysteriously with the result that the product has been scarce. Some buyers who gambled on lower prices by underselling the market finally had to cover on their sales by buying at a loss. Blends continued inactive with prices in line with straight run products.

Fuel Oil and Gas

The upward reaction in fuel oil which began two weeks ago was more in evidence the past week as prices continued to soar. Although fuel oil prices usually climb at this time of the year, the present strength can be attributed largely to the coal strike and extra heavy demands for the products. Buyers attempting to cover sales at lower prices Tuesday were unsuccessful in filling their needs and had to resort to higher prices. There was a heavy movement of nearly all grades with even the low gravities commanding at least $1. The 24 26 fuel as low as $1.02½ was hard to find with the bulk of this grade moving at $1.05. The 28-30 fuel ranged from $1.10 to $1.15. Gas oil strengthened in line with fuel oil with the market trend toward 3⅛ to 3¼ cents. A few purchases were made as low as 3 cents.

Lubricants and Wax

All lubricating oils were quiet but prices remained fairly steady. The easing up in demand for lubricants in other parts of the country has caused a slackening in orders in Group 3 the past week Wax was unchanged.

Where you'll find them

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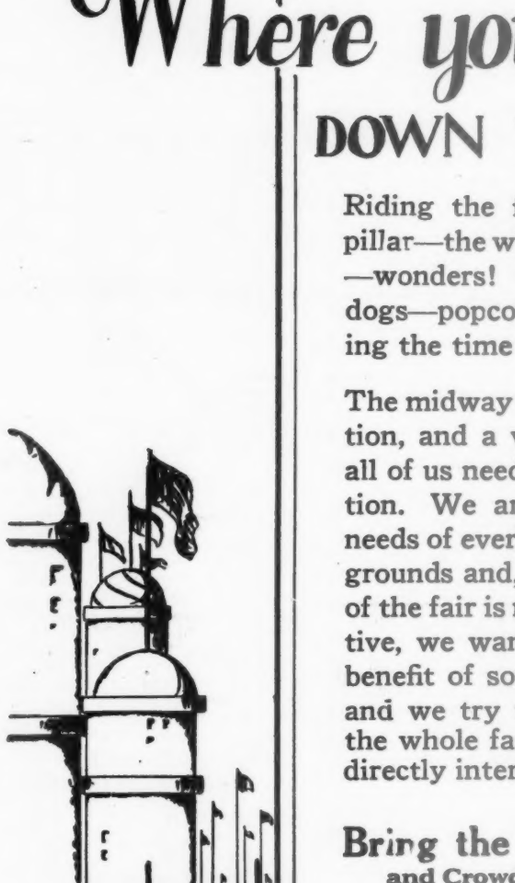
and Crowd Your Hours With Joy



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INTERNATIONAL PETROLEUM EXPOSITION

OCT. 1 TO 10 TULSA, OKLA. OCT. 1 TO 10

Detailed Operations in Western Fields for August, 1925

SUMMARY OF ALL FIELDS

Wells Completed

Field—	Comp.	Prod.	Dry	Gas
Eastern	467	2,746	63	82
Lima	60	940	4	1
Indiana	11	75	7	1
Central Ohio	54	531	17	27
Illinois	22	338	4	1
Kentucky	117	830	34	7
Tennessee	5	0	4	1
Kansas	213	16,680	77	5
Oklahoma	451	41,993	176	39
North Central Texas	407	23,660	152	8
East Central Texas	38	718	17	0
Louisiana-Arkansas	169	73,281	40	16
Gulf Coast	76	15,925	31	6
Southwest Texas	101	18,245	25	7
Wyoming	97	7,389	14	1
Montana	70	5,902	20	1
Colorado	6	1,450	4	0
New Mexico	16	2,020	3	1
Total August	2,380	212,723	692	206
Total July	2,502	358,203	605	205
Diffrence	122	145,480	87	2

Rigs and Wells Drilling

Field—	Rigs	Drg.	Total
Eastern	183	463	646
Lima	8	77	85
Indiana	1	19	20
Central Ohio	31	68	99
Illinois	2	25	27
Kentucky	15	249	264
Tennessee	7	25	32
Mississippi	2	10	12
Alabama	1	9	10
Georgia	1	4	5
Kansas	99	393	492
Oklahoma	308	1,114	1,322
North Central Texas	77	460	537
East Central Texas	15	64	79
Louisiana-Arkansas	103	444	547
Gulf Coast	34	168	202
Southwest Texas	48	155	203
Wyoming	74	332	406
Montana	21	126	147
Colorado	18	82	100
Utah	3	28	31
New Mexico	4	119	123
Total August	955	4,435	5,390
Total July	991	4,477	5,468
Difference	36	42	78

Note—In the following report the Section, Township and Range are given first; then the farm, the owner, the serial number of the well and the initial production of the well. The rigs and wells drilling are set forth in similar manner. In lines where the Section, Township and Range are missing the wells are located in the Sections, Townships and Ranges which appear next above in the report.

OKLAHOMA FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Osage	65	2,660	21	7
Tulsa	40	1,816	16	3
Rogers	10	130	3	1
Okmulgee	52	4,195	14	5
Seminole	16	2,175	6	0
Okfuskee	23	2,610	11	3
Hughes	34	3,605	13	4
Muskogee & Wagoner	13	15	10	2
Creek	46	1,845	20	3
Pawnee	24	1,975	13	2
Kay	27	10,810	8	1
Payne and Lincoln	16	4,341	3	1
Garfield	28	3,865	5	0
Noble	9	45	5	2
Stephens and Cotton	11	777	5	1
Carter	13	867	5	0
Miscellaneous	24	262	13	4
Total August	451	41,993	176	39
Total July	540	67,940	152	40
Difference	89	25,947	24	1

Summary of Rigs and Wells Drilling

County—	Rigs	Drg.	Ttl.
Osage	12	96	108
Tulsa	6	18	24
Okmulgee	29	92	121
Seminole	5	74	79
Okfuskee	16	62	78
Hughes	11	79	90
Muskogee and Wagoner	6	11	17
Creek	37	84	121
Pawnee	9	46	55
Kay	15	149	164
Payne and Lincoln	13	84	97
Garfield	11	73	84
Noble	1	27	28
Stephens and Cotton	8	48	56
Garvin and Pontotoc	2	29	31
Carter	10	45	55
Miscellaneous	14	100	114
Total August	208	1,114	1,322
Total July	214	1,214	1,428
Difference	6	100	106

WELLS COMPLETED

OSAGE COUNTY

19-21-10 Swoverland Oil 1 ..... gas
23-21-10 Breene et al 13 25
21-21-12 Oswego Pet. 2 5
16-22-9e Amedada Pet. 2 125
21-23-8e Beacon Oil 15 7
23-24-9e Foster & Norwood 49 10
1-24-11 Barnsdall Oil 2 15
32-24-12 Owen Osage Oil 331 ..... gas
34-25-11 I. T. I. Oil 331 ..... gas
32-27-5e Phillips Pet. 11 150
14-29-10 I. T. I. Oil 1 30
27-29-11 Wiser Oil 12 30
10-20-12 Devonian Oil 14 ..... gas
10-21-9e Phillips Pet. 3 15
16-21-12 Selby Oil 11 5
Sterling Oil 5 25
27-22-10 Tidal Osage Oil 21 15
13-23-8e Peters Pet. 33 15
28-24-10 Western American Oil 10
33-24-10 Peters Pet. 10 15
29-25-8e The Texas Co. 3 25
2-27-5e Phillips Pet. 4 840
12-27-5e Phillips Pet. 7 200
36-27-11 Kansoma Oil 1 15
27-29-11 Edity Oil 9 10
36-29-11 Simons et al 4 3
27-27-5e Prairie Oil 6 150
Prairie Oil 8 310
Prairie Oil 9 250
13-23-10 American Dev. 3 ..... dry
16-25-10 Beacon Oil 1 ..... dry
17-27-10 Merrill et al 3 ..... dry
29-28-12 The Texas Co. 1 ..... dry
6-27-7e Sinclair Oil 1 ..... dry
29-29-9e Wynona Oil 1 ..... dry
35-29-10 L. C. Duffield 1 ..... dry
36-29-11 Lamberton et al 1 ..... dry
18-28-12 Lot 25, Wynona Oil 3 7
2-24-11 Barnsdall Oil 5 1
8-20-12 F. Gilliland 26 5
31-21-11 K. R. Holm 2 ..... dry
8-21-12 C. W. Titus 1 ..... dry
14-22-11 Kewanee Oil 1 100
15-24-8e Oilphant et al 1 ..... dry
21-24-8e Tidal Osage Oil 1 ..... dry
27-29-11 Wiser Oil 13 10
12-27-5e Prairie O. & G. 14 150
15-26-6e Prairie O. & G. 3 45
12-27-5e Prairie O. & G. 5 180
Prairie O. & G. Co. 7 200
17-20-11 F. A. McClintock 1 ..... dry
6-20-12 Amerada Pet. 1 ..... dry
14-21-10 Devonian Oil 2 ..... gas
E. L. Conley et al 3 25
11-21-11 Lewis Oil 1 ..... dry
8-22-9e Atlantic Oil 4 ..... dry
17-22-9e Knupp et al 1 ..... dry
15-24-8e Fure Oil 2 ..... dry
25-24-8e Tidal Osage Oil 9 100
30-24-8e Amerada Pet. 1 ..... dry
32-24-12 Owen Osage Oil 336 ..... gas
12-25-5e Midland Oil 1 ..... dry
19-25-9e Olean Pet. 6 30
8-27-11 Owen Osage Oil ..... gas
11-27-11 Owen Osage Oil 340 ..... dry

Wells completed 65
Production 2601
Dry 21
Gas 7
Gas production 57,250,000

TULSA COUNTY

27-19-11 Russell, E. R. Minshall 1 ..... dry
6-19-12 Bruner, Shaffer O. & R. 4 ..... dry
18-19-14 Grayson, J. P. Peterson 1 ..... dry
14-19-20 Robinson, Holmes et al 2 50
27-19-11 Gaylord, Riverland Oil 3 5
29-19-12 Yargee, Mutual Oil 1 40
6-17-14 McIntosh, Lee Drlg. Co. et al 1 10
35-16-13 Lewis, Edwards et al 11 ..... gas
15-19-11 A. H. K., Sand Springs Home Oil 2 ..... dry
23-19-11 Steele, Greer et al 1 ..... dry
26-19-11 Wilson, Wood Oil 1-A ..... dry
21-19-12 Douglas, Thornton et al 1-A. dry
2-17-14 Childers, Hall et al 1 ..... dry
30-22-14 Goodale, J. H. Middleton 3 25
Rutledge, H. I., Van Nostrand 1 800
Bryant, Martha Oil 1 ..... dry
Moss, Albert H. Keys 1 10
Garber, J. H. Middleton 1 8
Rutledge, J. H. Middleton 1 .. 10
30-21-13 Phillips, D. Hammett et al 7 .. dry
4-19-11 Unallotted, Sand Springs Home Oil 2 ..... gas
16-18-13 Rentie, Black et al 13 15
2-17-14 Gaines, Wade et al 3 65
Unallotted, Frates Oil 4 50
Gaines, Green et al 2 25
19-19-10 Gaskine, R. H. Bartlett 1 20
23-19-11 Combs, Sand Springs Home Oil 1 ..... dry
4-19-12 Partridge, Ike Simmons 7 ..... gas
Childers, Jackson 1 ..... dry
29-19-12 Postoak, H. C. Wilson 6 50
Hawkins, Brooks Drlg. Co. 8. 40
30-19-12 Brown, E. D. Underwood 1 dry
2-18-13 McIntosh, E. D. Underwood 1. dry
35-18-14 Johnson, Thrift et al 2-A 50
36-17-12 Murray, Riverland Oil 1 .... dry
2-19-10 Harjo, Gled Oil 1 ..... dry
22-19-10 Island, Holmes et al 3 120
20-19-11 McKee, Pennock Oil et al 5.. 575
33-18-13 Stansbury, Elliott et al 1..... 5
14-16-12 Bowlin, Riverland Oil 3 ..... dry

Wells completed 40
Production 1816
Dry 16
Gas 3
Gas production 10,000,000

ROGERS COUNTY

35-22-15 Loury, Bert Clatfelter et al 1. 15
32-24-17 Patrick, S. T. Mallory 2 60
20-22-16 Montgomery, J. M. Caker, 11. 8
34-24-17 Spradden, S. T. Mallory 1 .... dry
32-24-17 Patrick, S. T. Mallory 3 40
34-24-16 Spadden, S. T. Mallory 1 ..... dry
13-21-16 Luton, Morrow & Ross 2 ..... dry
10-24-18 Clark, Powell Bros. 4 ..... gas
13-24-16 Mooney & Holtzendorf, A. E. Lynch 5 5
29-24-17 Walker, Tidal Oil 3 2

Wells completed 10
Production 130
Dry 3
Gas 1
Gas production 1,000,000

OKMULGEE COUNTY

3-15-11 Baker, Enfisco Oil 3 10
1-15-12 Rowe, Phillips Pet. 2 155
11-15-12 Cover, Olean Pet. 3 25
Cover, Olean Pet. 4 25
14-15-12 Culp, Page Bros. Oil 3 90
Strip, Oklahoma Eastern Oil 1 15
27-13-11 Scott, E. R. Black 1 ..... gas
5-12-12 Bird, Magnolia Pet. 1 ..... gas
20-12-12 Grayson, Continental Oil et al 6 15
4-11-12 Hawkins, Schoenfeldt et al 5. 20
25-13-14 Scott, W. R. Sommerville 1-A. 125
16-14-14 Colbert, J. Aggas 1-A 25
8-14-15 Anderson, Wineland Oil 11.... 25
7-15-13 Wisner, Devonian Oil 5 15
20-15-14 Lewis, J. A. Swindler 8 480
34-15-14 Barnett, Kingwood Oil 28.... 15
23-13-11 Murrell, Waite Phillips 2 ..... dry
31-12-12 Rentie "A", Astec Oil 4 ..... dry
1-11-13 Blackwell, Pulaski Oil 5 ..... dry
35-12-13 Ponds, Deep Fork 6 ..... dry
33-16-11 Peters, Sheridan Oil 1-A 15
3-15-11 Fee, Clover et al 5 25
14-15-12 Moore, Cosden Oil 3 200
4-11-12 Hawkins, Weir et al 1 5
2-13-14 Tucker, A. G. Haslett 1 ..... gas
7-13-15 Freeman, E. J. Lambert 4.... gas
8-15-14 Rowe, H. Hennessey 2 25
20-15-14 Lewis, The Texas Co. 16..... 40
34-16-12 Buffington, Berry Pet. 4..... dry
32-13-11 Beets, J. Brock et al 9..... dry
10-14-14 Stevens, Magnolia Pet. 9..... dry
28-14-14 Andy, W. R. Sommerville 3.. dry
3-15-11 Adams, Jackson & Wise 8.... 15
4-15-11 Gibson, Nowata O. & R. 1.... 20
17-15-11 Gibson, Shaffer O. & R. 5.... dry
23-13-11 Murrell, Waite Phillips 6.... 50
17-12-12 Kanard, Continental Oil 1.... 15
9-11-12 Hawkins, Moffit & Click 1.... dry
15-13-14 Scott, Roxana Pet. 3..... 100
21-14-14 Morris, Roxaline Oil 7..... dry
7-15-13 Fields, Devonian Oil 1..... 390
21-15-14 Osborn, Papoose Oil 20..... 1500
Osborn, Papoose Oil 22..... 700
14-15-12 Hogan, Olean Pet. 6..... 320
17-12-12 Kanard, J. A. Simmons 1.... dry
1-11-13 Thomas, Magnolia Pet. 8..... 525
27-13-14 Hill, Gypsy Oil 1-A ..... dry
7-13-15 Freeman, Marion Oil 4..... gas
14-14-14 Colbert, American Supply 3... dry
11-15-14 Francis, L. J. Misener 6..... 100
Francis, L. J. Misner 7..... 10
21-15-14 Osborn, Papoose Oil 21..... 450

Wells completed 52
Production 4195
Dry 14
Gas 5
Gas production 13,720,000

SEMINOLE COUNTY

34-11-8e Whitfield, McMann & Magnolia 1 335
5-10-8e Wisner, Gypsy & Laurel Oil 1 410
6-10-8e Lowe, Denver P. & R. Corp. 1 ..... dry
12-8n-7e Kelly, Magnolia Pet. 1..... dry
14-8n-7e Carolina, Link Oil 1..... dry
3-10-8e Hill, Nowata O. & R. 2..... 520
32-8n-8e Tiger, Magnolia Pet. 4..... 20
32-11-8e Lewter, Prairie Oil 2..... dry
28-11-8e Baker, Waite Phillips 1..... dry
15-11-8e Fixico, Holmes & Jarvis 1.... dry
510-8e Williams, Magnolia Pet. 2..... 10
15-10-8e Harjo, Houston Oil 4..... 200
36-8n-7e Logan, W. R. Ramsey 2..... 30
15-11-8e Lena, Guy Fisher et al 1..... dry
33-11-8e Jackson, Pure Oil 5..... 40
5-10-8e Wisner, Gypsy & Laurel 2.... 620

Wells completed 16
Production 2175
Dry 6

OKFUSKEE COUNTY

33-12-11 Jacobs, Independent Oil 2.... 50
25-11-9e Foster, Independent Oil 1..... gas
22-11-11 Guy, Windsor Oil & Inddependent Oil 2 200
Guy, Windsor Oil & Independent Oil 6 520
22-10-9e Samuel, Fuhrman & Shaffer 1 gas
4-11-11 Marrow, Independent Oil et al 1 ..... dry
31-10-10 Dacon, Carter Oil 1 ..... dry
33-12-11 McCoy, Josey Oil 5..... 500
3-11-11 Fields, Mid-Continent Pet. 3.. 10
16-10-9e Tecumseh, Gibson & Zahniser 1 ..... gas
21-10-11 Morton, White Eagle Oil 1.. 30
28-11-11 Unallotted, Vincent et al 1.. dry
14-12-11 Larney, Keaton & Gold 1..... 125
36-12-11 Rentie, Aztec Oil 12..... dry
22-11-11 Grayson, Windsor Oil 3..... 835
14-11-8e Lucinda, Holmes & Jarvis 1.. dry
16-10-9e Bruner, Kingwood Oil 1..... dry
19-10-10 Cook, Independent Oil 1..... dry
14-10-11 Ben, Mid-Kansas Oil 1..... dry
33-12-11 McCoy, Josey Oil 7..... 340
28-12-10 Fisher, Wedell & Blakely 1... dry
25-10-8e Bruner, Transcontinental Oil 1 dry
2-10-11 Johnson, Atlantic Oil 2..... dry

Wells completed 23
Production 2610
Dry 11
Gas 3
Gas production 135,500,000

HUGHES COUNTY

24-9n-8e Simon, Burk Grels 1..... gas
1-9n-9e Anderson, I. T. I. Oil 5..... 223
3-9n-11 Harjo, Tidal Osage Oil 3..... 45
3-9n-9e Grayson, T. B. Slick 4..... 25
4-9n-11e Harjo, Mid-Kansas Oil 1..... 335
20-8n-10 Hampton, Prairie Oil 2..... gas
17-9n-9e Brown, Margay Oil 5..... dry
Brown, Margay Oil 6..... dry
Brown, Roxana Pet. 1..... dry
Brown, Roxana Pet. 2..... dry
35-8n-8e Kiser, Roxana Pet. 1..... dry
Jefferson, Carter Oil 1..... dry
1-9n-9e Anderson, I. T. I. Oil 8.. 785
18-8n-10 Diamond "B", Dixie Oil 1... 67
23-9n-9e Mingo, Minnehoma Oil 1..... dry
35-8n-8e Barnett, Roxana Pet. 2..... dry
Jefferson, J. W. McCullough 3 dry
Jefferson, Waite Phillips 1.. dry
Jefferson, Waite Phillips 2.. dry
2-7n-8e Jefferson, McMann Oil 1.... dry
1-9n-9e Anderson, I. T. I. Oil 2.. 197
35-8n-8e Bulling, Roxana Pet. 1..... gas
Kiser, Roxana Pet. 2..... dry
Jefferson, Waite Phillips 1.. dry
8-9n-10 Harjo, Prairie O. & G. 1..... dry
2-9n-9e Carolina, Independent O. & G. 3 50
Carolina, Independent O. & G. 4 40
4-9n-9e Carter, E. L. Robinson & Amerada Pet. 8 645
23-9n-9e Bruner, Empire G. & F. 1... dry
35-8n-8e Proctor, Gypsy Oil 1..... 501
Proctor, Gypsy Oil 4..... 67
Jefferson, J. W. McCullough 2 625
14-8n-9e Long, Independent et al 1.. gas
2-7n-8e Jefferson, Phillips Pet. 1 .... dry

Wells completed 34
Production 3605
Dry 18
Gas 4
Gas production 141,500,000

MUSKOKEE AND WAGONER COUNTIES

25-17-16 White, Larsarskey 2 ..... gas
36-13-17 Arnott, C. B. Travis 1..... dry
21-16-17 McKellop, Wickham 1..... dry
22-16-18 Grayson, A. A. Landis 1..... dry
17-17-15 Johnson, O. S. Eastman 1.... dry
29-17-18 Marshall, E. Coady 1..... dry
18-17-15 Pike, Mussie Oil 4..... dry
2-17-16 McIntosh, Hartman 2..... 15
25-18-15 Atkins, A. E. Carder 4..... dry
29-18-17 Childers, F. E. Webb 1..... gas
6-15-9e Crittenden, H. G. Wells 4.... dry
7-15-16 Smith, Wilson 4 ..... dry
2-17-16 McIntosh, Kenmaker et al 3.. dry
Wells completed 13
Production 15
Dry 10
Gas 2
Gas production 9,000,000

CREEK COUNTY

8-18-7e Yarhola, Carter Oil 40 70
13-17-8e Bishop, Transcontinental Oil 2 40
23-16-8e Scott, Lorraine Pet. 3 200
17-15-8e Mitchell, Joemack Oil 5..... 50
23-15-8e Yarhola, The Texas Co. 2..... 5
13-14-8e Sewell, C. G. Tibbins 7..... 5
21-17-9e Charcoteuno, Wood & Farren 3 530
20-17-10 Wiley, Adams & Gilpin 1..... 30
1-16-11 Anthis, Wilcox & Oswalt 4.... 150
18-14-10 Harjo, Southwestern Oil 3.... 110
8-18-9e Samuels, The Texas Co. 4..... dry
22-16-8e Knoll, Laurel Oil 10 ..... dry
25-17-9e Manley, Bu-Vi-Bar 2..... dry
Manley, Bu-Vi-Bar 3 ..... dry
Self, Gypsy Oil 1 ..... dry
34-16-9e Brady, Twin State Oil 3..... dry
31-15-9e Lucas, Skelly & Billingslea 4. dry
13-19-8e Peters, Gled Oil 1 10
14-14-8e Francis, C. G. Tibbens 1..... 150
25-17-9e Williams, The Texas Co. 1.... 165
24-17-10 Dawson, J. H. Wright 5..... 110
8-17-11 Layton, Jackson & Wise 1.... gas
1-16-11 Anthis, Wilcox et al 2..... 165
31-15-9e Lucas, C. G. Tibbens 3..... 40
24-17-7e Ingalls, Transcontinental Oil 2 dry
3-18-11 Allen, W. H. Gray et al 1-A.. dry
8-16-11 Robbins, Pennock Oil 2..... dry
5-19-8e Maxey, T. E. Mann Oil 1..... 30
13-19-8e Peters, Lassen Bros. 2..... 25
22-19-8e Nero, Shaffer O. & R. & Markham 1 ..... dry
24-16-8e Ford, The Texas Co. 1-A..... dry
1-14-8e Brown, T. P. C. & O. Co. 1.. dry
14-18-9e Chanubia, Transcontinental Oil 1 ..... dry
6-18-12 Bigpond, Regal Oil 26..... dry
25-17-9e Self, Pure Oil 1 ..... dry
Williams, The Texas Co. 2.... dry
5-16-12 Amrine, Nowata O. & R. 1.... dry
6-16-9e Hill, Waite Phillips 2..... 25
8-16-12 Jackson, White Eagle O. & G 3 10
4-14-10 Jones, Joemack Oil 2..... 50
29-18-10 Mitchell, Sapulpa Fuel Co. 2.. dry
28-17-11 Barnett, McClung et al 1..... 15
30-15-9e Unallotted, Tibbens O. & G. 16 gas
17-14-10 Johnson, Gladys Belle Oil 1... dry
20-14-10 Scott, Wilcox O. & G. 1..... 15
33-17-12 Gilcrease, Prairie O. & G. 1.. gas

Wells completed 46
Production 1845
Dry 20
Gas 2
Gas production 8,000,000

PAWNEE COUNTY

5-22-3e Altaffer, Magnolia Pet. 4..... 200
16-20-7e School land, Mid-Continent Pet. 12 40
21-20-7e Sublet, Tidal Oil 7..... 50
10-22-5e Powell, A. D. Krow et al 1.... dry
22-22-4e Walker, Prairie Oil 1..... gas
15-23-4e Corrian, Tidal Oil 1..... dry
4-22-3e Miller, Watchorn Oil 2..... 260
Miller, Watchorn Oil 6..... 270
20-24-5e Bengree, Phillips Pet. 1..... dry
22-23-4e Choteau, Comar 1..... dry
Choetau, Gypsy Oil 1..... dry
10-22-6e Towner, J. B. White et al 1.. dry
20-22-6e Hand, Privett Drlg. Co. 1.... dry
19-21-8e Unknown, Wasson & West 1-A dry
31-21-8e Havercamp, J. B. Grieves 1-A gas
16-20-6e School land, Privett & Sloan 1 50
16-20-7e School land, Mid-Continent Pet. 13 40
32-23-3e Robodeaux, Magnolia Pet 4.. dry
4-22-3e Miller, Magnolia Pet. 6..... 700
8-22-3e Whitemule, Magnolia Pet. 1.. dry
1-20-7e Mullendore, Selby & Gypsy Oil 20 365
13-20-8e Drake, Deep Rock O. & G. 1 dry
25-20-8e Russell, Haley, Garber & Pulse 1 ..... dry
19-20-10 Lenox, W. Blake et al 1-A.... dry

Wells completed 24
Production 1975
Dry 13
Gas 2
Gas production 2,500,000

KAY COUNTY

5-28-1w Bechtel, Comar Oil 3..... 137
8-28-1w Townsite, E. B. Shawver 1.... 75
Horne, Comar Oil 2..... 117
12-26-1w North, Marland Oil 1..... 150
17-27-1w Boyce, Prairie Oil 1..... 75
28-29-1w Murphy, Comar Oil 1½..... dry
13-27-1e School land, Producers & Refiners Corp. 1 ..... dry
26-25-2w Davis, Marland & Embry 1.... dry
31-27-2e Harris, Soulliny et al 1..... 80
35-26-1w Ogg, Comar Oil 4-W ..... dry
Ogg, Comar Oil 6-W ..... dry
Ogg, Comar Oil 7-W ..... dry
5-28-1w Bechtel, Comar Oil 2..... 1383
8-27-1w Higgins, Anolu Oil 1..... 45
1-26-2w Richmond, Marland Oil 2.... 385
12-26-2w Hubbard, Marland Oil 2..... 252
11-26-4e Decou, McMann et al 1..... dry
34-25-1w Beverlin, Comar Oil 6-W 145
17-27-1w Boyce "A", Prairie O. & G. 1 75
1-26-2w Smith "A", Prairie O. & G. 5 242
16-29-1e School land, Wentz Oil 1.... gas
1-26-2w Hockstater, Marland Oil 4.... 200
22-25-2w Siler, Twin State Oil 2..... 2795
27-25-1w Suiter, T. B. Slick 1..... dry
28-25-1w Mahoney, Wentz Oil 2..... 1565
34-25-1w McKee, Wentz Oil 51..... 1056
Beverlin, Comar Oil 17-W.... 1867

Wells completed 27
Production 10810
Dry 1
Gas 1
Gas production 2,500,000

PAYNE AND LINCOLN COUNTIES

23-18-3e Goodno, Deep Rock Oil 1..... 625
5-17-4e Flint, Mulberry Oil 1..... 25
2-14-5e Sukovaty, Magnolia Pet. 3.... 505
3-14-5e Stout, Prairie Oil 8..... 26
36-17-4e Tibbett, J. V. Bailey et al 1.. dry
32-18-4e Payne, Mulberry Oil 3..... gas
34-15-5e Ingram, Magnolia Pet. 4..... 200
3-14-5e Suovaty, Magnolia Pet. 1..... 709
Stout, Prairie O. & G. 9..... 765
35-19-5e Laughlin, Josey Oil 7..... 245

15-18-3e Taylor, Amerada Pet. 1..... dry
26-18-4e Broyles, New England O. & P. L. 1 200
2-18-5e Laughlin, Shaffer O. & R. 12. 140
Laughlin, Shaffer O. & R. 14 280
3-14-5e Sukovaty, Magnolia Pet. 2.... 612
19-14-6e Olney, Amerada Pet. 1..... dry

Wells completed 16
Production 4341
Dry 3
Gas 1
Gas production 16,000,000

GARFIELD COUNTY

13-22-4w School land, Cosden & Marland 48 150
School land, Cosden & Marland 50 10
School land, Cosden & Marland 51 30
Walker (North), Sinclair Oil 11 10
18-23-3w Schroeder, Roxana Pet. 9..... 30
Schroeder, Roxana Pet. 27... 497
Hartley, Sinclair Oil 17 176
30-23-3w Windler, Sinclair Oil 10 15
Campbell, Sinclair Oil 19..... 50
31-23-3w Morrison, Sinclair Oil 9..... 35
7-22-3w Lynds, D. W. Franchott 3.... dry
19-22-3w Kisner (West), Sinclair Oil 18 dry
13-22-4w School land, Cosden & Marland 52 800
25-22-4w Hoy, Sinclair Oil 19 25
19-22-3w Laura Crews, Sinclair Oil 11.. 150
31-22-3w McLean, Imo Oil 3 175
13-22-4w Wolfe, Roxana Pet. 2 ..... dry
School land, Cosden & Marland 49 50
Walker (North), Sinclair Oil 21 80
18-22-3w Whitney, Haley, Garber & Pulse 1 70
12-22-4w Wishard, Prairie O. & G 7... 90
13-22-4w Wolf, Roxana Pet. 1-W.....1160
School land, Cosden & Marland 38 ..... dry
Walker (North), Sinclair Oil 4 ..... dry
Walker (North), Sinclair Oil 22 40
23-22-4w Davis, Sinclair Oil 2 200
16-22-3w Allen, Champlin Ref. 2-B.... 10
19-22-3w Kisner (West), Sinclair Oil 8 12

Wells completed 28
Production 3865
Dry 5

NOBLE COUNTY

2-24-1w Blubaugh "A", Comar Oil 13-W ..... dry
3-24-1w Ruzek, Comar Oil 3-W..... dry
1-24-1w Blubaugh, Comar Oil 23 .... gas
Blubaugh, Comar Oil 1-D .... gas
30-24-1w Wilkins, Mid Co. Pet. 1-A.... 25
20-24-2e Ray, Ossenbeck et al 1 ..... dry
15-23-2w Washburn, Mid Co. Pet. 13... dry
Washburn, Mid Co. Pet. 11-A. dry
2-24-1w Shawver, Gypsy Oil 92 20

Wells completed 9
Production 45
Dry 5
Gas 2
Gas production 13,500,000

STEPHENS AND COTTON COUNTIES

25-1n-9w Thomas, Coline Oil 6-B 7
19-1n-8w Bridenthal, Ellis Drlg. Co. 6.. 25
10-1n-9w Roy, A. B. Cook 1 ..... dry
11-1n-4w Womack, Magnolia Pet. 1.... dry
11-2n-5w Martin, Magnolia Pet. 2..... dry
33-1n-8w Williams, Gant et al 2..... dry
17-1n-8w Dolen, Lone Star Gas 1..... dry
26-1n-9w Coffelt, W. M. Priddy 3 15
25-1n-25w Clark, Crump & Beard 1.... gas
32-1n-8w Eakes, Crump & Beard 2-A.. 230
12-2n-8w Fobb, Commercial Pet. 1..... 500

Wells completed 11
Production 777
Dry 6
Gas 1
Gas production 3,500,000

CARTER COUNTY

19-1s-3w Dixon, Humble Oil 1..... 50
28-5s-1e Westheimer, Amerada Pet. 9.. 45
Baptiste, Amerada Pet. 4 .. 25
32-2-s-2w Burrows, Humble Oil 3 ..... dry
22-2s-3w McLain, Wirt Franklin 1..... 325
9-4s-2w Hewitt-Walker, Humble Oil 16 50
34-1s-3w Parnell, Noble-Oleson 1..... dry
28-5s-1e Clay, Amerada Pet. 15..... dry
19-1s-3w Jordan, Humble O. & R. 1... 12
22-2s-3w Carpenter, Humble O. & R. 4 250
7-2s-2w Higgins, Coline Oil 2 110
28-5s-1e Geo. Fish, Amerada Pet. 2-A dry
34-5s-1e Wolverton, Amerada Pet. 4... dry

Wells completed 13
Production 867
Dry 5

MISCELLANEOUS COUNTIES

Grady County—
27-5n-8w Chandler, Okla. Natl. Gas 2.. gas
2-4n-8w Deryden, Briscoe & Hall 2.... gas
35-5n-8w Duke, Stogner et al. 1..... dry

Jefferson County—
34-6s-5w Seay, Prairie Oil 5 152
Seay, Prairie Oil 4 45

Alfalfa County—
21-27-10 Watts, McGinnis & Ward 1... dry

Grant County—
8-27-8w Moon, Midwest & Gulf 1..... dry
30-27-4w Fuss, Frank Traves et al 1... dry
20-26-4w Edwards, Embry & Leright 1 dry

Woods County—
10-25-15w Van Buskirk, Victor Oil 1... dry

Love County—
27-7s-2e Havercamp, Jackson & Askew 1 ..... dry

Pottawatomie County—
13-10-2e Howell, Ossie Oil 1..... dry

Comanche County—
24-2n-10w Cox, Cherry & Couch 1..... dry
3-1n-11w Howell, McBee & Homa-Okla Oil 1 ..... dry

Pittsburg County—
2-7n-18e Unknown, Quinton Oil 1 .... dry

Washington County—
4-26-13 Daugherty, Askin Oil 1 ..... gas
20-26-14 Thomas heirs, Dixon-Kemp & Strumple 5 10
Thomas heirs, Dixon-Kemp & Strumple 6 10
30-25-14 Chambers, G. W. Gambill 16 .. 5

Nowata County—
4-25-17 Lamar & Norris, Salt Creek Oil 5 ..... gas
1-25-16 Parrish, John & C. P. Shertzer 16 10
4-25-17 Still, Foster Pet. 1 ..... dry

Caddo County—
6-5n-9w Culp, Briscoe & Hall 4-A.... 30

Pontotoc County—
5-4n-5e Starritt, Craig et al 1..... dry

Wells completed 24
Production 262
Dry 13
Gas 4
Gas production 51,610,000

RIGS AND WELLS DRILLING

OSAGE COUNTY

Rigs

15-21-12 Titus et al 3.
12-23-8e Peters Oil 6.
20-23-10 Delmar Oil 1.
22-24-9e Foster & Norwood 6.
24-25-8e Gilliland Oil 7.
17-25-9e Fowler & Davis 10.
34-25-11 Devonian Oil 12.
21-26-6e Lewis Oil 12.
2-27-5e Skelly Oil 4.
Phillips Pet. 8.
26-27-5e Mid-Kansas Oil 9.
21-29-9e Winona Oil 3.

Wells Drilling

32-20-10 J. T. O'Reilley 1.
33-20-11 Sand Springs Home Oil 86.
5-20-12 Barnsdall Oil 15.
8-20-12 F. Gillespie 27.
10-20-12 Gled Oil 14.
1-21-8e I. T. I. Oil 5, 6.
2-21-8e Skelly Oil 4, 5.
3-21-8e Skelly & Moore et al 3.
10-21-9e Barnsdall Oil 7.
25-21-9e Devonian Oil 1.
10-21-10 Devonian & Marland Oil 1.
11-21-10 Mid-Kansas Oil 2.
Okla. Natl. Gas 239.
11-21-10 Tidal Osage Oil 1, 2.
23-21-10 Breene et al 14.
33-21-10 Roxana Pet. et al. 1.
5-21-11 Breene et al 11.
7-21-12 Commercial Drlg. Co. 1.
16-21-12 Selby Oil 29.
19-21-12 Kewanee Oil 5.
28-21-12 Kewanee Oil 23.
30-21-12 Elliott & Smith 19.
31-21-12 Barnsdall Oil 27.
2-22-9e Redecker 1.
20-22-10 Gypsy Oil et al 2.
18-22-9e Meridian Pet. 6.
27-22-10 Tidal Osaage Oil 22.
19-22-12 Winona Oil 1.
28-22-12 Knupp et al 1.
14-23-8e Twin State Oil 1.
7-23-11 Owen Osage Oil 337.
12-24-8e Atlantic Oil 1.
21-24-8e Hivick et al 1.
28-24-8e Axelrod et al 2.
22-24-9e The Texas Co. 3.
25-24-9e Marland Oil 7.
29-24-9e Continental & Prairie Oil 5.
32-24-9e I. T. I. Oil 314.
11-24-10 Barnsdall Oil 9.
28-24-10 Winona Oil 15.
12-24-11 Titus et al 8.
32-24-12 Owen Osage Oil 339.
36-25-6e I. T. I. Oil 1.
11-25-7e Gypsy Oil 1.
5-25-8e Continental Oil 1.
19-25-8e Wrightsman et al 5.
29-25-8e Lewis Oil 5.
10-25-10 Phillips Pet. 1.
27-25-11 I. T. I. Oil 332.
34-25-11 Devonian Oil 10, 11.
17-26-6e Shannon et al 1.
20-26-6e Carter Oil 6, 7, 8, 9.
21-26-6e Lewis Oil 9, 10, 11.
Carter Oil 13, 14, 15, 16.
1-26-7e Morton et al 1.
3-26-11e Kanupp & Phillips 3.
25-27-5e Phillips Pet. 16.
17-27-6e Peters-Phillips 1.
18-27-6e Phillips Pet. 16.
20-27-6e Phillips Pet. 6.
2-27-7e Tidal Oil 1.
17-27-10 Merril et al 4.
36-28-10 Owen Osage Oil 341.
3-28-11 I. T. I. Oil 1.
17-29-6e Phillips Pet. 3.
21-29-9e J. W. Keller 3.
33-29-9e L. C. Hivick 1.
29-29-10 I. T. I. Oil 333.
22-29-11 Winona Oil 8, 9.
27-29-11 Wiser Oil 14.
12-27-5e The Prairie O. & G. 15, 16.

Shut Down

29-20-11 Sand Springs Home Oil 3.
4-23-10 Robert Otto 2.
32-24-8e Seamans 1.
33-24-9e Peters Pet. 5.
4-25-9e Petroleum Drlg Co. 13.
1-25-11 Robinson et al 5.
34-26-4e The Texas Co. 1.
21-26-8e The Texas Co. 1.
3-26-9e Ike Johnson 1.
36-29-11 Simons et al G. 5.
7-24-12 Mid-Kansas Oil 1.
Rigs, 12; wells drilling, 96, total 108.

TULSA COUNTY

Rigs

5-19-12 Grayson, Echo Oil 4.
4-19-10 Unallotted, O'Reilly et al 3.
29-19-12 Colbert, Mutual Oil 2.
34-19-12 Templin, Suppes et al 1-A.
16-18-13 Parkins, Hutchinson O. & G. 1-A.
5-17-14 Hodge, Alboo Oil 1.

Wells Drilling

4-19-10 Lindsey, Steele et al 1.
22-19-10 Island, Holmes et al 2.
3-19-11 Fee, Sand Springs Home Oil 1.
34-19-11 Inchoe, Riverland Oil 4, 5.
36-19-11 Wicey, Regal Oil 4.
3-19-12 Cox, Henson 1-A.
6-19-12 Bruner, Shaffer O. & R. 5.
29-19-12 Colbert, Mutual Oil 1.
30-19-12 Bodrey, Nowata O. & R. 3.
25-17-12 Kiefer, The Texas Co. 2.
3-16-12 Sanderson, S. W. Anthony 2.
13-16-12 Kirk, Winemiller et al 2.

Shut Down

15-19-11 Fife, Minshall et al 1.
9-19-12 Unallotted, John King 1.
4-19-12 Grayson, S. L. Johnson 1.
27-17-14 Slinton, Sparks et al 1.
11-16-12 Hooie, Winemiller et al 21.
Rigs, 6; wells drilling, 18; total, 24.

OKMULGEE COUNTY

Rigs

24-16-12 Tiger, Oklahoma Nat. Gas 3.
35-16-12 Staley, W. B. Pine 2.
3-15-11 Fee, Clover Bros. 6.
11-15-11 Adams, Cosden Oil 5.
17-15-11 Gibson, Shaffer O. & R. 6.
1-15-12 Rowe, Phillips Pet. 4.
12-15-12 Gay, Western Central Oil 1.
17-15-12 Gonseth, The Texas Co. 1.
23-15-12 Arch, Noble O. & G. 1.
29-15-12 Unallotted, Nickelson 1.
17-14-13 Hance, Superior Oil et al 1.
3-13-11 Anderson, Vincent et al 1.
25-13-11 Kemp, Pure Oil 6.
Lewis, J. A. Swindler 3.
27-13-11 Partee, E. R. Black 1.
7-12-12 Wilson, Independent O. & G. 1.
4-11-12 Hawkins, Schoenfeldt et al 4.
17-11-12 Summers, Decises et al 3.
36-12-12 Bruner, Pulaski Oil 2.
12-13-13 Gray, Mid-Continent Pet. 13.
26-13-14 Ross, Independent O. & G. 8.
4-14-13 Marshall, Becker 1.
22-14-14 Wright, Dunn Drlg. Co. 11.
7-15-13 Field, Devonian Oil 2.
18-15-13 Doyle, W. B. Pine 2.
11-15-14 Francis, L. J. Misener 9.
21-15-14 Osborn, Hastings 4.
Osborn, Papoose Oil 28, 29.

Wells Drilling

30-16-11 Thomas, Sheridan Oil et al 1.
32-16-11 Thompson, Shaffer O. & R. 1.
34-16-11 Bruner, Paraffine Oil 6.
25-16-12 Self, Gibbdness et al 1.
27-16-12 Haskins, Independent O. & G. 12
34-16-12 Vore, Poe & Sheldon 2.
35-16-12 Staley, Suppes et al 4.
36-16-12 Lyons, Phillips Pet. 1.
10-15-11 Adams, Beggs O. & G. 15.
23-15-11 Bruner, Le Bean et al 1.
1-15-12 Escoe, E. P. Harwell 2.
Rowe, Phillips Pet. 3.
2-15-12 George, Wade Oil Corp. 1.
10-15-12 Bighead, T. A. Johnson 2.
14-15-12 Marshall, Devonian Oil 5.
Culp, Page & Bros. Oil 1, 4.
Hogan, Olean Pet. 7.
Moore, Cosden Oil 4, 5.
Askron, Independent O. & G. 1.
17-15-12 Gonseth, Iron Mtn. Oil 1.
12-14-11 Biggerstaff, Simmons et al 8.
13-14-12 Wright, Joe Gardner 1.
25-14-12 Burton, Ed King et al 1.
34-14-12 Vierson, Kellough et al 1.
9-13-11 Smith, Gowland et al 1.
25-13-11 Lewis, J. A. Swindler 2.
28-13-11 Sands, Laurel O. & G. 1.
32-13-12 Unallotted, Eagle Picher & Mid-Cont. Pet. 1.
33-13-12 Barnett, Eagle Picher Oil 1.
Strip, Waite Phillips 1.
4-12-12 Tiger, Magnolia Pet. 1-A.
20-12-12 Grayson, Continental Oil et al 1.
31-15-12 Rentie, Simms Oil 4-A, 5-A, 5-B.
3-11-12 Calloway, B. Martin et al 1.
5-11-12 Jackson, C. O. Buckles 1.
7-11-12 Holmes, Moffitt et al 3.
1-11-13 Coody, W. R. Surdevant 1.
6-11-13 Warden, E. P. Jones 3.
25-12-13 Byrd, Kingwood Oil 5.
35-12-14 Wesley, Independent O. & G. 1-A.
Wesley, T. B. Slick, 1-A.
19-12-14 Batts, Sands Pet. 1.
20-12-14 Hawkins, W. B. Pine 1.
30-12-14 Batts, Sterling Oil 2.
12-13-13 Alexander, Mid-Continent Pet. 17.
11-13-14 Tucker, A. G. Hazlett 4.
15-13-14 Scott, Utah Oil 14.
24-13-14 Johnson, Iron Mtn. Oil 14.
Thornsberry, Iron Mtn. Oil 9.
25-13-14 Scott, W. R. Sommerville 2-A.
23-14-14 Thomas, Mid-Continent Pet. 2.
8-14-15 Anderson, J. L. Powell 5.
7-15-13 Wisner, Devonian Oil 1, 6.
19-15-13 Depriest, C. G. Terien 1.
35-15-13 Jefferson, Southwest Oil Fields Co. 2.
2-15-14 Barnett, Ozark Oil 2.
11-15-14 Francis, L. J. Misener 8.
18-15-14 Peters, Acta Oil 1.
20-15-14 Lewis, Laurel Oil 6.
Lewis, J. A. Swindler 9.
Lewis, The Texas Co. 17.
21-15-14 Osborn, Papoose Oil 24.
Osborn, Papoose Oil 27.
25-13-11 Tobler, The Prairie O. & G. 1.

Shut Down

20-16-12 Fee, Crider 1.
4-15-11 Gibson, Sheridan Oil 1.
6-15-11 Thompson, H. C. Wilson 2.
17-15-11 Gibson, Amerada Pet. 1.
4-15-12 Kible, McCarthy et al 1.
14-15-12 Moore, Cosden Oil 2.
Shepherd, Independent O. & G. 2.
15-15-12 Brown, Denton & Marshall 1.
6-14-12 Cover, Waite Phillips 2.
14-13-11 Thompson, Wood Oil 4.
22-13-11 Smith, C. L. Detter et al 1.
31-12-12 Rentie, Wooster & Mee 4.
32-11-12 Ashbury, Webb et al 1.
36-12-13 Bruner, Pulaski Oil 8.
30-12-14 Anderson, Alsen Drlg. Co. 1.
33-13-14 Gambler, E. J. Lambert 2.
20-13-14 Bear, A. Shelton 1.
22-14-14 Wright, Kewanee Oil 9.
21-15-14 Osborn, Papoose Oil 23, 25, 26, 24.
35-15-14 Harris, Hilde 4.
Rigs, 29; wells drilling, 92; total 121.

SEMINOLE COUNTY

Rigs

5-10-8e Williams, Magnolia Pet. 3.
Wisner, Magnolia Pet. 7.
24-9n-6e Dyer, I. T. I. Oil 1.
1-8n-7e Higdon, Dempsey et al 1.
27-8n-8e Brown, J. W. McCullough 1.
6-7n-8e Carolina, Homaokla Oil 2.
Dindy, Superior Oil 1.
24-5n-5e Nitley, Riverside & Kinney 1.

Wells Drilling

8-10-8e Youngblood, The Prairie O. & G. 1.
3-10-8e Owens, The Prairie O. & G. 5.
28-11-8e Williams, Waite Phillips 1.
Harjo, Southwestern Pet. 1.
Hill, Sinclair-Houston Oil 6.
32-11-8e Fields, Phillips Pet. 1.
Williams, Phillips Pet. 1.
33-11-8e Hill, Sinclair-Houston Oil 5.
Williams, Carter & Pulaski Oil 3.
34-11-8e Whitfield, McMann & Magnolia 2.
33-10-6e Davis, F. J. Searight 1.
3-10-8e Hill, Nowata O. & R. 3.
Dunn, Carter Oil 16.
5-10-8e Sikey, Laurel Oil 2.
Wisner, Gypsy & Laurel Oil 3.
Williams, Gypsy & Laurel Oil 2.
E. Williams, Gypsy & Laurel Oil 1, 2.
Williams, Magnolia Pet. 4.
Wisner, Magnolia Pet. 5, 8.
8-10-8e Baker, Tidal Osage Oil 3.
15-10-8e Moss, Roxana Pet. 3, 4.
Harjo, Schermerhorn Oil 1.
Yarhola, Mid-Continent Oil 5-W.
32-10-8e Wallas, I. T. I. Oil 1.
10-9n-5e Ingram, Morgan & Flynn 1.
15-9n-6e Noble, Superior Oil 1.
7-9n-8e Jefferson, Plover Drlg. Co. 1.
Carter, Independent O. & G. 1.
8-9n-8e Hill, Berry Pet. 1.
Waiters, Independent O. & G. 1.
31-8n-6e Pullatka, Superior Oil 1.
14-8n-7e Jackson, T. B. Slick, 1.
15-8n-7e Thomas, The Texas Co. 1.
23-8n-7e Haning, Magnolia Pet. 1.
28-8n-7e Oug, Magnolia Pet. 1.
20-8n-8e Brown, Homaokla Oil 1.
29-8n-8e Cosua, Magnolia Pet. 1.
Walker, Dixie Oil 4.
30-8n-8e Casey, Magnolia Pet. 1.
31-8n-8e Amos, W. R. Ramsey, 1, 4.
Bowlegs, P. & R. Corp. 1-B.
33-8n-8e Seran, Magnolia Pet. 3.
Long, Lewis & Clark 2-A.
34-8n-8e Carter, P. & R. Corp. 1.
4-7n-6e Walker, Byran Bros. 1.
12-7n-7e Cudjo, Magnolia Pet. 1.
22-7n-7e Davis, Transcontinental Oil 1.
26-7n-7e Fore, Dixie Oil 1.
5-7n-8e Harjo, Magnolia Pet. 1.
6-7n-8e Davis, Champlin & Bass 2.
Knight, Dixie Oil 4.
Hawkins, P. & R. Corp. 1.
Harber, Magnolia Pet. 1.
23-6n-5e Dorman, T. B. Slick 1.
33-11-8e Baker, Carter & Pulaski Oil 5, 6.

Shut Down

5-10-8e Sarkey, Laurel Oil 1.
1-9n-5e Sanjo, F. J. Searight 1.
22-9n-8e Williams, Holmes & Jarvis 1.
20-8n-8e Bowlegs, Gardner Pet. 1.
31-8n-8e Sampson, W. R. Ramsey 2.
31-8n-8e Salinda, W. R. Ramsey 1.
Salinda, P. & R. Corp. 2.
Willis, Boggs Oil & Sykes 6.
33-6n-6e Christy, Maxwell & Harvey 1.
6-6n-8e Winey, R. F. Garland & Co. 1.
6-7n-8e Hawkins, Buttram et al 1.
Rigs, 8; wells drilling, 71; total, 79.

OKFUSKEE COUNTY

Rigs

4-13-8e Saryokishe, Link Oil 2.
14-12 8e Lewis, Western States Oil 1.
18-12-8e Bear, Dalton & Baker 1.
17-14-11 Hance, Superior Oil et al 1.
1-13-9e Ross, H. E. Clark & Mt. Fork Oil 1.
13-12-11 Harjo, Amerada Pet. 8.
14-12-11 Larney, Betty Ann Oil 1.
Bird, J. E. Dow et al 1-A.
15-12-11 Gardner, J. W. Moore et al 1.
27-12-11 Holmes, Hartman 1.
33-12-11 McCoy, Josey Oil 9.
Fields, Josey Oil 1.
Stubblefield, Josey Oil 1.
26-11-10 Hill, J. E. Dow, 1.
10-11-11 Washington, Blakely O. & G. 2.
23-11-11 Jefferson, Windsor Oil 1.
15-10-9e Bruner, Kingwood Oil 1.

Wells Drilling

14-12-8e Billy, Western States Oil 1.
28-12-10 Johnson, Central Natl. Oil 1.
13-12-11 Sugar, Anglo-Texas Oil et al 3.
18-12-11 Harjo, Atlantic O. P. Co. 1.
22-12-11 Jacobs, Independent O. & G. 1.
Barnett, Hartman & Mann 7.
32-12-11 Hulsey, Josey Oil 2.
33-12-11 McCoy, Josey Oil 1.
McCoy, Josey Oil 8.
Carolina, Independent O. & G. 2.
Jacobs, Independent O. & G. 3.
25-11-9e Yarhola, Eagle Picher 1.
36-11-9e Wind, Olean Pet. 2.
27-11-10 Sawyer, Burk Greis et al 1.
2-11-11 Watson, Tidal Oil et al 1.
3-11-11 Fields, Barbara Oil 2.
8-11-11 Sears, Josey Oil 1.
19-11-11 Barnett, Riverland Oil 1-A.
21-11-11 Harjo, Savoy Oil 1.
22-11-11 Guy, Windsor Oil & Independent Oil 8.
24-11-11 Barnett, Henry Oil & Amerada Pet. 9.
Field, Minnehoma Oil 9.
12-11-7e Fipps, Amerada Pet. 1.
15-11-8e Frank, Southwestern Pet. 1.
Lena, Southwestern Pet. 3.
14-10-8e King, Tidal & Carter Oil 3.
15-10-9e Bruner, Burk Greis Oil 1.
16-10-9e Tecumseh, The Texas Co. 1.
33-10-9e Barnett, Jennings et al 3.
Barnett, Arkansas Fuel Co. 1.
34-10-9e Williams, Gypsy Oil 4.
36-10-9e Harjo, Amerada Pet. 6.
Dacon, Amerada Pet. 2.
11-10-11 Hill, Lou Umburn 3.
18-10-11 Alberty, Morgan, Flynn & Amerada 1.
33-10-11 Cubbie, Tidal Osage Oil 2.
34-10-11 Harjo, Tidal Oil 1.
2-10-12 Goober, W. C. Newman 1.
8-10-12 Fisher, McCarty et al 1.
25-11-9e Wright, Frank O. & G. 1.
34-10-9e Davis "B," Prairie O. & G. 1
5-11-11 Graham, Prairie O. & G. 1.

Shut Down

23-13-7e Byrd, Sinclair Oil 1.
28-13-8e Hill, Dalton & Baker 1.
1-12-7e Bruner, Waite Phillips 1.
3-12-10 Hivem, Alex Bays et al 1.
8-12-10 Yarhola, Blakely et al 1.
23-12-10 Harjo, Blakely et al 1.
33-12-11 Fields, Josey Oil 4.
34-12-11 Deer, G. & M. Oil 1.
36-12-11 Rentie, McMahon, Kingwood et al 2-A.
21-11-9e Weeley, J. K. Leard et al 1.
2-11-11 Smith, Tidal Oil et al 1.
5-11-11 Sears, Hartman et al 1.
22-11-11 Guly, Windsor Oil & Independent O. & G. 3, 4.
6-11-8e Pierce, Waite Phillips 1.
14-11-8e Lucinda. Gardner Pet. 1.
34-10-9e Williams, Gypsy Oil 3.
Williams, Gypsy Oil 5.
36-10-9e Dacon, Amerada Pet. 1.
15-10-10 Tiplaw, Pratt & Burton 1.
Rigs, 17; wells drilling, 62; total, 79.

HUGHES COUNTY

Rigs

1-9n-9e Cain, Carter & Sands Pet. 2.
Anderson, Atlantic & Bass 2.
Cain, Minnehoma Oil 2.
Cain, Waite Phillips 1.
14-9n-9e Bowlegs, Douglas Oil 1.
4-9n-11 Harjo, Gibson & Zahniser 2.
9-9n-11 Lucy, Tidal Osage Oil 2.
5-8n-11 Bird, Kingwood Oil 1.
13-7n-9e Irving, Independent O. & G. 1.
8-6n-10 Kite, Whayne & Marshall 1.
11-5n-8e Stewart, Parmenter et al 1.

Wells Drilling

25-9n-8e Johnson, J. W. McCullough et al 1.
1-9n-9e Cain, Carter & Sands Pet. 1.
Anderson, Atlantic & Bass 1.
Anderson, I. T. I. Oil 7.
Arbor, Josey Oil 4.
Arbor, Josey Oil 5.
2-9n-9e Carolina, Gypsy Oil 1.
Carolina, Independent O. & G. 2.
Grayson, Gypsy Oil 1.
3-9n-9e Grayson, T. B. Slick, 5, 8, 10, 11
C. Arber, Phillips Pet. 5, 6, 7.
10-9n-9e Polk, T. B. Slick 1, 2, 3.
13-9n-9e Manley, Harris-Hayes et al 1.
17-9n-9e Smith, Transcontinental Oil 1.
19-9n-9e Charles, I. T. I. Oil 1.
22-9n-9e Bowlegs, Gypsy & Foster Inv. Co. 2.
26-9n-9e Harjo, Transcontinental - Fuhrman Oil 1.
21-9n-10 Buck, Sands Pet. 1.
23-9n-10 Dunzy, Farmac-Yarnell Drlg Co 1
28-9n-10 Canard, P. & R. Corp. 1.
3-9n-11 Harjo, Tidal Osage Oil 1.
4-9n-11 Harjo, Tidal Osage Oil 3.
Harjo, Gibson & Zahniser 1.
8-9n-11 Porter, Tidal Osage Oil 1.
9-9n-11 Lucy, Tidal Osage Oil 3, 4.
10-9n-11 Hudson, Mid Kansas Oil 1.
1-8n-8e Manley, Sinclair Oil 1.
24-8n-8e Brooks, Champlin, Bass et al 1

36-8n-8e Lowe, Phillips Pet. 1.
35-8n-8e Bulling, Roxana Pet. 2.
Proctor, Gypsy Oil 3.
Jefferson, Gypsy Oil 1, 2.
Lowe, Gypsy & Houston Oil 1, 2, 3.
Jefferson, Independent O. & G. 1, 2, 3, 4.
Jefferson, J. W. McCullough 1-A.
C. Jefferson, J. W. McCullough 1.
35-8n-9e Harjo, Independent O. & G. 1.
17-8n-10 Carter, Phillips & Robinson 1.
18-8n-10 Diamond, Sinclair Oil 1.
Irving, Dixie Oil 2.
Diamond "B," Dixie Oil 2.
Diamond "C," Dixie Oil 2.
Seacrest, Independent & Amerada 1.
Irvine, Independent & Gladys Belle Oil 2, 3.
19-8n-10 Alexander, Carter Oil 2, 4.
32-8n-10 Voorhees, Gypsy Oil et al 1.
31-8n-12 Barnet, W. C. Newman 2.
11-7n-8e Proctor, Independent O. & G. 1.
13-7n-8e Shawnego, I. T. I. Oil 1.
23-7n-8e Manley, Magnolia Pet. 1.
28-7n-8e Bruner, J. L. Brock, Jr., 1.
10-6n-8e Murphy, W. H. Ramsey 1.
8-6n-10 Kite, Walton, Snyder & Marshall 1.
30-5n-10 Pearson, Henry Greis & Kerr 1.
28-9n-10 Canard, Prairie O. & G. 1.

Shut Down

11-8n-8e Larney, Dixie Oil 1.
12-8n-8e Herrod, Roxana Pet. 1.
35-8n-8e Bulling, Roxana Pet. 3.
18-8n-10 Alexander, Independent & Gladys Bell Oil 2.
19-8n-10 Alexander, Carter Oil 3.
14-7n-8e Narcome, W. R. Ramsey 1.
14-7n-10 Sewell, Atkins et al 1.
4-5n-11 McClain, Mathers & Sicelly 1.
Rigs, 11; wells drilling, 79; total 90.

MUSKOGEE AND WAGONER COUNTIES

Rigs

4-13-16 Hawkins, Blakely 1.
26-13-16 Peters, J. A. Shepard 1.
6-14-17 Manule, J. L. Slusher 1.
32-15-19 Price, Buell & Bradley 2.
2-16-16 Smith, J. Young 2.
2-17-16 McIntosh, Kenmaker 4.

Wells Drilling

1-14-16 Smith, W. N. Harsha 3.
34-14-16 Roberson, Blakely 2.
1-14-17 Sango, T-O Pet. 7.
36-16-17 Brown, Hale & Greer 2.
24-17-16 Tiger, R. E. Fike 1.
17-18-15 Kernal, A. G. Hazlett 1.
29-18-17 Murrell, Flint Ridge 1.
19-18-18 Burton, P. E. Hill 1.
16-16-14 Mason, S. S. Cullenan 3.

Shut Down

32-16-15 McDaniel, G. A. Simons 1.
21-17-15 Dan, W. McDougal 1.
Rigs, 6; wells drilling, 11; total, 17.

CREEK COUNTY

Rigs

5-19-8e Fife, The Texas Co. 1.
11-19-8e Miller, H. U. Bartlett et al 1.
14-19-8e Lewis, Gled Oil 4.
36-18-8e Carman, Atlantic O. P. Co. 1.
14-17-8e Fry, Atlantic O. P. Co. 4.
19-17-8e Cubbie, Transcontinental Oil 1.
22-17-8e Johnson, Savoy Oil 1.
24-17-8e Harjo, Waite Phillips 2.
21-16-8e Major, Tidal Oil 1.
17-15-8e Yarhola, Pure Oil 15.
Wilson, Roxana Pet. 11.
Roberts, Eastern Oil 5.
Roberts, Eastern Oil 10.
20-15-8e Beaver, Skelly Oil 1-A.
34-15-8e Sewell, Tibbens O. & G. 1.
12-14-8e Brown, P. C. & O. Co. 1.
18-15-9e Sewell, Roxana Pet. 1-A.
18-18-9e Jones, Eva Bell Oil 3.
1-18-11 McGuire, Gypsy Oil 17.
3-18-11 Leader, Gray Oil 1.
6-18-12 Strip, B. E. Kennedy et al 1.
Strip, Munn Bros. 1.
21-17-9e Harjoche, T. P. C. & O. Co. 3, 5.
36-17-9e Self, Kiyoche Oil 6.
19-17-10 Dickson, Tidal Oil 1.
24-17-10 Tankaney, J. H. Wright 3.
30-17-11 Gerald & Nichols, M. F. Evans 1.
7-16-9e Sango, W. R. Davis 1.
20-16-9e Barnett, Dickerson et al 1.
29-15-9e Posey, Tibbens O. & G. 1.
18-14-10 Dixon, Wilcox O. & G. 1.
Harjo, Southwestern Oil 3.
20-14-10 Stuart, C. F. Noble 5.
30-14-8e Kernal, Prairie O. & G. 7.
3-17-8e Sidwell, Prairie O. & G. 1.
5-16-8e Hammer, Prairie O. & G. 10.

Wells Drilling

5-19-8e Noble, Whitten et al 1.
13-19-8e Lowe, J. B. Grieves 4.
Ross, Gled Oil 1.
14-19-8e Lewis, Gled Oil 3.
Hinton, Kiskaddon et al 2.
17-19-8e Flowers, Sickinger & Smith 1.
25-17-7e Smith, Harnady et al 1.
13-17-8e McIntosh, Bu-Vi-Bar 1.
14-17-8e Fry, Atlantic O. P. Co. 3.
21-17-8e Kano, Walter & Holmes 1.
23-17-8e Freeman, Savoy Oil 1.
32-17-8e Washington, Olean Pet. 5.
5-16-8e Emarthle, Magnolia Pet. 2.
3-15-7e Rogers, F. R. Billingslea 1.
6-15-7e Emarthla, Okla Nat. Gas 1.
25-15-7e Charles, Lima O. & G. 1.
22-15-8e Williams, The Texas Co. 1.
25-15-8e Herrod, C. G. Tibbens 1-A.
30-15-8e Halcoweney, Phillips Pet. 2.
31-15-8e Wattie, Phillips Pet. 2.
7-14-7e Hood, Roxana Pet. 2.
Stover, Pure Oil 3.
13-14-8e Beavers, The Texas Co. 2.
Bearhead, C. G. Tibbens 4.
3-19-9e Morgan, Burton & Holmes 3.
9-18-8e Ford, Christy et al 1.
22-19-9e McClain, Shaffer O. & G. & Tidal 3.
7-18-9e Maloney, Billingslea 1.
17-18-8e King, H. U. Bartlett et al 3.
10-18-10 Parks, Schooley et al 1-A.
27-18-10 Allen, Vaughn & Wheeler 6.
28-18-11 Johnson, Riverland Oil 1.
6-18-12 Gray, Gypsy Oil 13.
19-17-9e Wright, Pure Oil 2.
21-17-9e Harjoche, T. P. C. & O. Co. 2.
27-17-9e Leahley, Lima O. & G. 1.
30-17-9e McIntosh, Roland Oil 1.
36-17-9e Self, Young et al 1.
23-17-10 Kichanney, Bu-Vi-Bar 1-A.
24-17-10 Tahkaney, J. H. Wright 9.
Dawson, J. H. Wright 6.
Buckitrot, H. C. Wilson 3.
3-17-11 Unallotted, S. J. Smith 3.
4-17-11 Deenun, McClung et al 1.
5-17-11 McDougal, W. J. Cole 1.
8-17-11 Freeman, Ireland 2.
6-16-8e Barnett, T. P. C. & O. Co. 3.
21-16-8e Jacobs, Emery & Sons 6.
1-16-11 Anthis, Wilcox & Oswalt 5.
8-16-12 Jackson, R. J. Allison et al 1.
9-16-12 Burnett, Turner & Suppes 1.
14-15-9e Wilson, Nowata O. & G. Co. 1.
30-15-9e Unallotted, C. G. Tibbens 1.
Unallotted, Tibbens O. & G. 14, 15.
28-15-10 Harry, Cumberland Oil 1.
24-14-9e Bradbury, Phillips Pet. 4, 5.
1-14-10 Withers, Central Natl. Oil 1.
16-14-10 Tiger, Atlantic Oil 1.
20-14-10 Stuart, C. F. Noble 4.
Scott, Wilcox O. & G. 2.
Kimble & Reading, Wilcox O. & G. 11.
Knight, Hall & Donnelly 1.

Shut Down

13-19-8e Ross, Shaffer O. & R. 2.
14-19-8e Miller, Okla. Eastern Oil 1.
11-17-7e Artusseo, Mid-Cont. Pet. 15.
14-17-8e Fry, Black Gold Oil 1.
32-17-8e Washington, Olean Pet. 3.
12-16-8e Crosby, Danciger Oil 1.
29-16-8e Hawkins, Clayton, Lynch et al 1.
28-14-8e Mitchell, Papoose Oil 1.
18-18-9e Woodfork, Eva Bell Oil 1.
30-18-10 Willis, H. U. Bartlett 2.
2-18-11 Collins, E. R. Minshall 1.
6-18-11 Haynes, Hartman & Williams 1.
9-18-11 Tahlodge, Waxler et al 1-A.
32-18-11 Frew, Cross et al 1.
19-17-10 Wanuke, Sherman et al 2.
13-17-11 McIntosh, A. Sheldon 1-A.
32-16-9e Roberts, Buckholtz 1-A.
30-15-9e Winters, T. S. Coryell et al 1.
5-14-10 Groom, Evans et al 1.
11-14-10 Webb, H. George et al 1.
Rigs, 37; wells drilling, 84; total 121.

PAWNEE COUNTY

Rigs

34-24-5e Venator, Mid-Kansas O. & G. 1.
22-23-4e Zoldoskie, Donahue & Carter Oil 4.
3-22-5e Ackerman, E. B. Rich et al 1.
16-22-7e Unknown, Bu-Vi-Bar 1.
11-21-5e Reed, F. R. Billingslea 1.
4-20-7e Hallet townsite, W. A. McCabe et al 1.
11-20-7e Rogers, Block & Carnahan 1-A.
21-20-7e Subler, Tidal Oil 8.
35-20-7e McMuttrie, Chas. H. Burton 1.

Wells Drilling

27-23-3e Donahue, Magnolia Pet. 1.
33-23-3e Miller, Watchorn O. & G. 12.
4-22-3e Miller, Magnolia Pet. 8.
Saunders, Magnolia Pet. 3.
5-22-3e Altaffer, Magnolia Pet. 1.
22-23-4e Zoldoskie, Amerada Pet. 2.
27-23-4e Brian, Sinclair Oil 1.
4-23-5e Bahlman, Mid-Kansas Oil 1.
26-23-5e Smith, Noble O. & G. 1.
29-23-5e Newport, Magnolia Pet. 1.
24-22-4e Bayhylle, C. J. Wrightsman 1.
8-22-5e Feaster, Magnolia Pet. 1.
22-22-6e Tracy, New England Oil 1.
13-21-7e McIntyre, Minnehoma Oil 4.
17-21-7e Diehnel, R. E. Freeman Oil 2.
29-21-7e Forbrag, J. H. Markham 1.
31-21-8e Unknown, Adamson Oil 1.
32-21-8e Sigon, Adamson Oil 5.
9-20-6e Fugate, Magnolia Pet. 2, 1.
16-20-6e Baker, Magnolia Pet. 7.
Rimmer, Elmar O. & G. 5.
21-20-6e Lesher, Dennesy et al 3.
Lesher, Magnolia Pet. 8, 9.
Freeman, Josey Oil 2.
29-20-6e Canfield, Magnolia Pet. 1.
8-20-7e Hutchinson, Turner et al 1.
9-20-7e Rule, Noble Oil 2.
17-20-7e Canfield, Sun Ray Oil 6.
6-20-8e Lucas, Wasson & West 2-A.
7-20-8e Martin, Shelts et al 1-A.
24-20-8e Hennessy, McMahon Oil 3.
Wasson, Southwestern Oil Field Co. 17.
9-20-9e Unknown, Schoenfeldt et al 1.
1-21-5e Berg, Prairie Oil & G. 1.

Shut Down

33-23-3e Brown, Watchorn O. & G. 1.
33-23-3e Miller, Mariand Oil 2, 4.
25-22-6e Bell, Victor Oil 1.
5-20-8e Aten, Adamson Oil 1-A.
24-20-8e Head, J. W. McCullough et al 1.
30-20-8e Longton, Schauble & Breslin 4.
17-20-9e Coats, E. L. et al 1.
18-20-10 Going, Holmes et al 1.
28-20-6e White, Davis Drlg. Co. 1.
Rigs, 9; wells drilling, 46; total, 55.

KAY COUNTY

Rigs

20-29-1w Day, The Texas Co. 1.
3-28-1w David, Day Oil & Ketcherid 1.
8-28-1w Townsite, Wire & Ketcherid 1.
Oard, Connelly & Laraux 1.
9-27-1w Shawn, Harris & Hahn 2.
Cumler, Carter Oil 2.
31-27-2e Harris, Twin State Oil 1.
Schmidt, Comar Oil 1.
1-26-2w Richmond, Marland & Amerada 3, 4.
14-25-2w Fuller, Twin State Oil 1.
15-25-2w Thomas, Carter Oil 2.
28-25-1w Siler, L. Freidman 2.
16-29-5e Chas. Noble et al 1.
1-26-2w Smith "A," Prairie O. & G. 7.

Wells Drilling

25-29-2w Sheets, Hickman & Barnhart 1.
16-29-1w School land, Cosden O. & G. 1.
21-29-1w Priboth, Comar Oil 5.
Harvell, Comar Oil 5.
28-29-1w Murphy, Comar Oil 2½.
32-29-1w Campbell, White Eagle Oil 1.
16-29-1e School land, Marland Oil 1.
5-28-1w Townsite, Herbert Oil 3.
Bechtel, Comar Oil 4.
Biddle, Comar Oil 1.
McCullough, Comar Oil 1, 2.
8-28-1w Townsite, Mid-Cont. Pet. 1.
Townsite, Joe Cain et al 1.
Townsite, L. & M. Oil 1.
Horne, Comar Oil 2.
Andrew, Wantz Oil 1.
9-28-1w Hampton, Nealy et al 1.
33-28-1w School land, Simms Oil 1.
31-28-3e Street, Davis Drlg. Co. 1.
36-27-2w School land, Cosden Oil 1.
7-27-1w Bailey, Ostot Drlg. 1.
Bacon, Blackwell O. & G. 1.
8-27-1w Jamison, Harris & Hahn 1.
Mastiff, J. E. Miller et al 1.
9-27-1w Burkholder, Poling & Denny 2.
Geiger, Blackwell O. & G. 3.
Brown, Harris & Hahn 2.
Moore, Black Gold Oil 1.
10-27-1w Barr, Anolu Oil 2.
24-27-1w McClelland, M. F. McComas 1.
22-27-2e Butler, Mississippi Valley Oil 1.
1-26-2w Fitzgerald, Marland Oil 2, 5.
Richmond, Marland & Amerada 1-A.
Richmond, Mutual Oil 2, 3.
2-26-2w Moore, Wheelan Drlg. Co. & Tonkawa Oil 1.
12-26-1w Sodowsky, Harris & Hahn 1.
9-25-2w Chambers, Gypsy Oil 1.
15-25-2w Thomas, Carter Oil 1, 3.
Herbig, Gypsy Oil 1, 2.
Herbig, Selby O. & G. 1.
Hallman, Comar Oil 1, 2.
Thomas, Marland Oil 1-A, 3, 4, 5.
16-25-2w School land, Cosden Oil 1, 2.
School land, Marland Oil 1, 1-A, 3, 4, 5, 6.
21-25-2w Turk, Marland Oil 1, 1-A.
Thomas, Wentz Oil 1, 2.
Turk, Carter Oil 2, 3.
22-25-2w Birdsell, Marland Oil 1.
Stahl, Marland & Phillips Pet. 1.
Siler, Twin State Oil 3, 4, 5, 6.
26-25-2w Hangartman, Independent O. & G. 1.
33-25-2w School land, Pennock Oil 1.
School land, Mid-Continent Pet. 1.
14-25-1e Little Chief, O'Kansas Oil 1.
27-25-1w Davis, The Texas Co. 10, 11, 12, 13.
28-25-1w Mahoney, Wentz Oil 3, 4, 5, 6.
33-25-1w School land, Cosden & Marland Oil 6-A, 7-A, 9.
34-25-1w Beverlin, Comar Oil 9-W, 10-W, 16-W.
35-25-1w Ogg, Comar Oil 1-W.
20-27-4e LeWright & Gay 1.
22-29-4e King Drlg. Co. 1.
1-26-2w Smith "B," Prairie O. & G. 4.
10-27-1w Jones, Prairie O. & G. 3.
21-25-2w Hoisington, Prairie O. & G. 1.

Shut Down

21-29-1w Priboth, Comar Oil 2.
5-28-1w Jones, E. V. Shawver 1.
Fisher, Reiter-Foster Oil 1.
Bechtel, Comar Oil 5.
Orr, Comar Oil 1, 2.
6-28-1w Via, Amerada Pet. 1.
7-28-1w Vickers, B. Slick 1.
8-28-1w Townsite, Wrightsman Pet. 1.
Townsite, Louis Freidman 1.
Townsite, Herbert Oil 1.
Townsite, Meade Bros. 1.
Townsite, Mummert et al 1, 1.
Townsite, Stanley & Jones 1, 1.
Townsite, Triangle Oil 1.
Townsite, Mid-Cont. Pet. 1.
Townsite, C. B. Davis 1.
Townsite, S. B. Wendall et al 1.
Townsite, Joe Cain et al 1, 1, 1.
Townsite, Canadian Pet. 1.
Townsite, Lassen et al 1.
Townsite, Broadhurst et al 1.
Townsite, Benedum-Trees Oil 1.
Townsite, Windle et al 1.
Townsite, Walls & Wade 1.
Townsite, Fitzgerald Const. Co. 1.
Townsite, Jackson et al 1.
Townsite, Bird, Vergress et al 1.
Townsite, J. Fred Harrison 1.
11-28-1e Lowery, Okla. Northern O. & G. 1.
10-27-1w Humphries, Blackwell O. & G. 6.
16-27-1w Skelton, Manahan et al 3.
18-27-1w Johnson, Una Lee Oil 1.
32-27-1w Chambers, O'Kansas 1.
1-26-2w Fitzgerald, Marland Oil 4.
Richmond, Empire G. & F. 1.
12-26-2w North, Marland Oil 2.
6-26-1w Glasgow, Natl. Union Oil 1.
4-25-2w Kreger, Clair Smith 1.
15-25-2w Herbig, Gypsy Oil 3.
22-25-2w Birdsell, Sinclair Oil 1.
27-25-2w Simmons, W. E. Brown Oil 1.
27-25-1w Suiter, McMann Oil 5.
30-25-1w Pool, Bailey & Thornton 1.
34-25-1w Endicott, Pennock Oil 2.
35-25-1w Endicott, Comar Oil 3-W.
Endicott, T. B. Slick 4-E.
1-28-3e Cortez Oil 1.
36-28-4e Terminal Oil 1.
Rigs, 15; wells drilling, 149; total, 164.

PAYNE AND LINCOLN COUNTIES

Rigs

2-20-2e Catt, Colorado O. & G. 1.
23-18-3e Boyles, Deep Rock O. & G. 1.
32-18-4e Payne, Muberry Oil 4.
2-18-6e Lorett, Blauner & Hartley 1-A.
6-17-4e Kaufman, Skelly Oil 1.
25-15-5e Stahl, Flynn, Morgan & Young 1.
6-15-6e Earp, Carter Oil 2.
7-15-6e Ford, Skelly Oil 3.
8-15-6e Earp, Mid-Cont. Pet. 2.
7-14-4e Kentzelten, M. W. Schriver 1-A.
10-14-5e Townsite, Davenport O. & G. 1.
3-14-5e Stout, Prairie O. & G. 11, 12.

Wells Drilling

16-20-2e School land, Waite Phillips & Gypsy 1.
24-19-1e Jackson, Amerada Pet. 1.
24-19-4e Pleasants, Olean Pet. 1.
8-19-5e Garr, Garr Oil 4.
17-19-5e Boyd, The Texas Co. 1.
35-19-5e Laughlin, Josey Oil 6, 8.
23-18-3e Goodno, Deep Rock O. & G. 2, 3.
Derry, Deep Rock O. & G. 2.
Shannon, Deep Rock O. & G. 1.
Haley, Amerada Pet. 1.
Haley, Mulberry Oil 1, 2.
Ostrander, Pure Oil 1.
1-18-5e Laughlin, Home Gas 4.
Laughlin, Josey Oil 2-A, 5.
2-18-5e Bushee, Josey Oil 2.
Laughlin, Shaffer O. & R. 15.
7-18-5e Blue, Marland Oil 2.
11-18-5e Laughlin, Wheeler, High et al 1.
14-18-5e Craza, Home Gas Co. 1.
19-17-3e Sutton, Roy Willis et al 1.
5-17-4e Straun, Mulberry Oil 3.
Flint, Mulberry Oil 2.
Sharrum, Shaffer O. & R. 3.
6-17-4e Foster, Home Gas Co. 1.
20-17-6e Johnson, Hiram C. Wilson 1.
33-17-6e Messawat, Independent O. & G. 1.
22-15-2e Harris, F. O. Howarth 1.
36-15-4e Cull, Ruby et al 1.
34-15-5e Ingram, Magnolia Pet. 5.
Sproleder, Magnolia 3, 4.
35-15-5e Jefferson, Pure Oil 1, 2.
Caves, Gypsy Oil 1.
5-15-6e Howard, Independent O. & G. 1.
6-15-6e Earp, Carter Oil 1.
Earp, Independent O. & G. 1.
7-15-6e Ford, Skelly Oil 2.
Spurgeon, Gypsy Oil 1.
8-15-6e Earp, Mid-Cont. Pet. 1.
13-15-6e Bowers, Cosden Oil 1.
12-14-4e Leake, Pure Oil 2.
2-14-5e Tipton, The Texas Co. 3, 4, 5.
Bigwater, Twin State Oil 2, 3, 4.
Tuttle, Carter Oil 1.
Sukovaty, Magnolia Pet. 4, 5, 6.
3-14-5e Sukovaty, Magnolia Pet. 2, 4, 5, 6.
F. Sukovaty, Magnolia Pet. 3, 4, 5, 6.
Sproleder, Magnolia Pet. 2.
Bagwell, Selby & Southwestern Oil 5, 6, 7.
8-14-5e Martin, Magnolia Pet. 1.
10-14-5e Nickel, Shaffer O. & R. 1.
11-14-5e Caves, Gypsy Oil 3.
Chapman, Magnolia Pet. 1.
15-14-6e De Lasier, Wilcox O. & G. 2.
7-13-3e Ewing, Douglas Oil 1.
14-13-6e Heinzig, P. & R. Corp. 1.
3-14-5e Stout, Prairie O. & G. 10.

Shut Down

21-19-1w Lewis, Ponca O. & G. 1.
1-18-5e Laughlin, Josey Oil 4.
30-18-5e Driggs, Willis O. & G. 2.
17-15-3e Powell, Santrock Drlg. Co. 1.
31-15-4e Gardner, Okla. Nat. Gas 1.
15-15-6e Hubbard, Johndahl 1.
12-14-6e Townsite, Dowell et al 2.
26-12-2e Dodrill, Eugene Costa et al 2.
Rigs, 13; wells drilling, 84; total 97.

GARFIELD COUNTY

Rigs

34-24-3w Hayes, Roxana Pet. 1.
36-23-5w Nelson, Ostot et al 1.
13-22-4w School land, Cosden & Marland 53, 54.
14-22-4w Dively, Sinclair Oil 5.
25-22-4w Hoy, Sinclair Oil 21.
Louis, Swindler, Sinclair Oil 15.
36-22-4w Kisner E., Sinclair Oil 6.
18-22-3w Schroeder, Roxana Pet. 4-W, 5-W.
11-21-4w Fee, Beople et al 1.

Wells Drilling

14-24-3w Gorusch, Fogar Oil 1.
19-23-3w Garber, Marland Oil 1.
13-22-4w Wolfe, Roxana Pet. 3.
School land, Cosden & Marland 41, 42, 43, 44, 45, 47.
Denker, Sinclair Oil 25, 26.
Walker, (North), Sinclair Oil 5, 19, 20.
14-22-4w Dively, Sinclair Oil 2.
15-22-4w Searcy, Magnolia Pet. 3.
24-22-4w Belveal, Healdton O. & G. 29, 30, 31, 32.
Belveal, Sinclair Oil 26, 28, 29, 30, 31,27.
Walker (South,) Sinclair Oil 26.
24-22-4w Beggs, Champlin Refg. 34.
Dively, Carter Oil 52, 53, 54, 55.
25-22-4w Frickenschmidt, Sinclair Oil 11.
26-22-4w Crooks, Chas. E. Knox 3.
36-22-4w Kisner, Sinclair Oil 5.
Austin, Sinclair Oil 5.
5-22-3w Mayes, Carlew Drlg. Co. 1.
18-22-3w Schroeder, Roxana Pet. 26, 1-W, 2-W, 3-W.
Shaffer, Sinclair Oil 9.
Hartley, Sinclair Oil 3, 18.
19-22-3w Crews, Crews Heirs Oil 18.
Kisner, Sinclair Oil 4, 20, 21, 23.
Crews, Sinclair Oil 9.
30-22-3w Crews, Sinclair Oil 12.
Burns, Sinclair Oil 1.
12-21-5w Smith, Tidal Oil 1.
8-21-3w Barties, Dieckwald Oil 1.
22-21-3w Detwiler, Silck, Harrington et al 1.
12-22-4w Wishard, Prairie O. & G. 6.

Shut Down

10-24-4w Meyers, Sinclair Oil 1.
17-23-8w Dyche, Jack Reid et al 1.
26-23-7w Cox, Katherine Oil Synd. 1.
6-23-6w Hess, Weir & Wood 1.
35-22-3w Carter, Failing & Lawson 1.
3-22-5w Swinery, Ashby & Barr 1.
1-22-4w Seaman, Hopper et al 1.
13-22-4w Denker, Sinclair Oil 6.
27-22-4w Peters, Hopper et al 1.
36-22-4w Heim, Imo Oil 8.
19-22-3w Kisner, Sinclair Oil 3.
2-21-7w Montgomery, Frank Frantz 1.
31-21-5w Vanderwork, E. A. Summers 1.
12-21-4w Schriver, Beople et al 1.
7-20-6w Semard, O. O. Owens 1.
13-20-4w Farmel, Summers et al 1.
25-20-4w Rhodes, William King 1.
Rigs, 11; wells drilling, 73; total, 84.

NOBLE COUNTY

Rigs

15-21-2w Taylor, Magnolia & Bu-Vi-Bar Pet. 1.

Wells Drilling

2-24-1w Blubaugh 'C," Comar Oil 3-W, 4-W
3-24-1w Pettit, Comar Oil 5-W.
36-24-1e Warrior, Gypsy Oil 1.
14-23-2w Snyder, Mid Co Pet. 4½.
16-23-2w O'Neil, Mid Co Pet. 10-A.
1-22-2w White, K. D. Oil 1.
26-22-2w Shoop, Champlin Refg. 1.
33-22-2w Burk, Elane Oil 1.
27-22-1e Wentz, Wentz Oil 1.
14-21-2w Austin, Magnolia Pet. 1.
16-21-2w Haufman, Red Bank Oil 1.
Treman, Red Bank Oil 1.
21-21-2w Wooleson, Magnolia & Bu-Vi-Bar 1.
22-21-2w Young, Magnolia & Bu-Vi-Bar 1.
28-21-2w Snyder, Bu-Vi-Bar Pet. 1.
29-21-1e Thelle, Belt Pet. 1.

Shut Down

2-24-1w Gaume, Comar Oil 4-W, 15-W.
3-24-1w Pettit, Comar Oil 17-W, 19-W.
9-24-1w Crober, John Herron 1.
21-24-12 Birch, Champlin Refg. 1.
14-24-2e Edmonds, Ossenbeck et al 1.
7-21-1w Williams, R. L. Corley 1.
32-20-1e Hall, Nelson & Hardin 1.
12-21-3e Sawyer, Ossenbeck & McMann 1.
Rigs, 1; wells drilling, 27; total 28.

STEPHENS AND COTTON COUNTIES

Rigs

2-2n-5w Garza, Pauline, Clark & Cowden 1
25-1n9w Harris, Magnolia Pet. 11.
12-1n-5w Shortes, Shaner Drlg. Co. 1.
12-1s-8w Worrel, Grisby et al 2.
32-1s-8w Potts, Lorraine Pet. 3.
Shelton, Lorraine Pet. 5, 8.
26-1n-9w Brown, Atlantic O. P. 1.

Wells Drilling

2-2n-5w Garza, Green & Leah 1.
25-1n-9w Ketchum, American P. L. Co. 3, 4.
26-1n-9w Coffelt, Ka Wye Pet. 3.
Brown, Ka Wye Pet. 5.
26-1n-9w Brown, Eagle Creek Oil 1.
Fleming, Magnolia Pet. 1.
32-1n-8w Morgan, Magnolia Pet. 7.
Morgan, Western Arch Oil 3.
35-1n-7w Boyd, Law, Angelo et al 1.
11-1n-5w Tubbi, Crump & Beard 3.
23-1s-10w Bondurant, A. A. Peard 4.
25-1s-9w Brooks, Magnolia Pet. 2.
Russell, Magnolia Pet. 4.
36-1s-9w School, Gant et al 1.
20-1s-8w Bartles, Magnolia Pet. 10.
18-1s-8w Leonard, Owl Oil 1.
22-1s-8w Worrell, Fisher & Brannon 5.
32-1s-8w Eakes, Crump & Beard 3-A.
33-1s-8w School land, Magnolia Pet. 18.
34-1s-8w Burke, David Maternee 1.
35-1s-8w Hanson, Fisher & Brannon 1.
34-1s-5w Ziegler, Magnolia Pet. 16.
5-2s-8w Forgay, Carter Oil 2.
Miller, Empire G. & F. 7.
14-2s-8w Woodward, Magnolia Pet. 2.
17-2s-7w Wilson, Magnolia Pet. 10.
18-2s-7w Bristowe, Mid-Kansas Oil 5.
Perry, Gant et al 1.
8-2s-6w Armstrong, Gant et al 2.
3-2s-5w Brown, Magnolia Pet. 1, 2.
11-2s-4w Yates, Magnolia Pet. 1.
36-4s-11w Wilson, Foutz, Rust et al 1-A.
11-2s-8w Parker, Magnolia Pet. 1.

Shut Down

8-2n-5w Waters, Clark & Cowden 1.
12-2n-5w Prince, Knox Pet. 1.
1-2n-4w Lindsey, Humble O. & R. 1.
25-1n-9w Hines, Ka Wye Drlg Co. 1.
Hines, Ka Wye Drlg. Co. & Roxana 1.
26-1n-9w Brown, Ka Wye Pet. 2.
31-1n-8w Brymer, Smith-Law Co. 2, 3.

25-1s-9w Brooks, Magnolia Pet. 4.
22-1s-8w Warner, C. & O. Drlg. Co. 4.
27-1s-8w Wilkinson, Big Twelve Oil 2.
Taliaferro, Big Twelve Oil 3.
28-2s-10w Fowler, David Malernee 1.
Rigs, 8; wells drilling, 48; total, 56.

GARVIN AND PONTOTOC COUNTIES

Rigs

28-5n-5e Copeland, La Salle et al 1.
4-4n-6e Daggs, Healdton O. & G. 1.

Wells Drilling

26-5n-8e Harjo, Dixie Oil 1.
33-5n-8e Shields, Homaokla Oil 1.
6-4n-5e Starritt, Bronson & Doyle 1.
9-4n-6e Burthrop, American O. & R. 1.
14-4n-7e Norris & Beck, Howarth O. &. G. 1.
8-1n-3w Deryden, T. P. C. & O. Co. 3.
16-1n-3w Orr, Magnolia Pet. 10.
17-1n-3w Deryden, The Texas Co. 8, 9.

Shut Downs

31-5n-5e Lewis, La Salle et al 1.
25-5n-6e Patterson, Gillette & Krueger 1.
34-5n-6e Ray, T. P. C. & O. Co. 2.
21-4n-1w Florence, Bedman et al 1.
4-4n-5e Hatcher, Highland Oil 1.
11-4n-6e Witherspoon, American O. & R. 2.
18-4n-6e McClure, Bran & Gillette 1.
31-4n-6e Harden, T. P. C. & O. Co. 1.
28-4n-7e Faulkner, Hughes et al 2.
19-3n-4w Ball, Magnolia Pet. 1.
10-3n-3e Hattie, Heath & Bauman 1.
13-3n-3e Delbeck, Gelina Oil 1.
8-1n-3w Deryden, Magnolia Pet. 2.
16-1n-3w Mauldin, Magnolia Pet. 5-A.
17-1n-3w Deryden, T. P. C. & O. Co. 3.
Deryden, Hope & Wilson 1.
Deryden, Carter Oil 4.
Deryden, Simms Oil 1.
5-1n-1e Christner, L. D. Jones 1.
18-1n-1e Richardson, Bendern et al 1.
Rigs, 2; wells drilling, 29 ;total, 31.

CARTER COUNTY

Rigs

20-2s-2w McCowan, Wirt Franklin 2.
21-2s-3w McClish, Skelly Oil 1.
22-2s-3w McClain, Wirt Franklin 2.
24-2s-3w Holeman, Miller et al 1.
2-2s-1w Potter, Amerada Pet. 1.
5-3s-2w Cobb, Atlantic O. P. 2.
8-3s-2w McGill, Schermerhorn 3.
Moyer, Merrick-Cameron 4.
1-4s-3e Barnes, Humble O. & R. 1.
28-5s-1e Fish, Amerada Pet. 3-A.

Wells Drilling

19-1s-3w Hardin, Magonila Pet. 2.
Winters, Magnolia Pet. 1.
Watson, Magnolia Pet. 1.
McCrory, Magnolia Pet. 1.
32-1s-3w Martin, Magnolia Pet. 1.
L. Johnson, Magnolia Pet. 1, 4.
33-1s-3w Gillespie, Humble O. & R. 1.
34-1s-3w Newstadt, Magnolia Pet. 1.
22-2s-3w Carpenter, Twin State Oil 1.
Carpenter, Humble O. & R. 5.
23-2s-3w Lohman, Magnolia Pet. 5, 6.
24-2s-3w Smith, Magnolia Pet. 7, 8, 9, 10.
Walker-Voorhees, Cameron Refg. 4, 5.
30-2s-2w Brooks, Franklin-Carter, 3-A.
31-2s-2w Burrows, Healdton Pet. 5.
31-2s-1w Chase, Sturm & Slick 1.
1-3s-3w Rollins, Magnolia Pet. 1.
5-3s-2w A. & F., Wirt Franklin 4.
Berry, Cameron Refg. 1.
8-3s-3w Ledbetter, Colline Oil 1.
Watkins, Cameron-Noble Oil 1.
Moyer, Merrick-Cameron 5.
Moyer, Humble O. & R. 1.
22-4s-1w Black, Humble O. & R. 1.
9-4s-2w Lowery, Merrick-Coe 4.
Lowery, Simpson & Fell 2.
Hewitt-Walker, Humble O. & R. 17.
10-4s-2w Walker, Simpson & Fell 3.
20-5s-1e Morris, Amerada Pet. 1-A.
28-5s-1e Fish, Amerada Pet. 12.
Westheimer, Amerada Pet. 10.
24-5s-1e Simpson, Amerada Pet. 2.

Shut Down

19-1s-3w Morris, McGee 1.
22-2s-3w Lohman, Wirt Franklin 2.
27-3s-2e Brown, Home Oil 1.
31-4s-1w Gooding, Frank Buttram et al 1.
16-4s-1e Bishop, Felmlee et al 1.
13-5s-3w Beal, Wickenhiser 1.
28-5s-1e Fee, Westheimer 5.
Rigs, 10; wells drilling, 45; total 55.

MISCELLANEOUS COUNTIES

Rigs

Grant County—
23-25-4w Vallner, Cowden 2.
Woodward County—
4-23-17w Nordyke, Diamond Drlg. 1.
Oklahoma County—
17-14-2w Lynn, Von Stein & Hagerling 1.
Grady County—
31-10-8w Thompson, Hawkins & Young 1.
2-8n-8w Bray, John Schwartzfischer 1.
23-5n-8w Edmondson, Stogner et al 2.
Farwell, Briscoe & Hall 2.
25-5n-8w Reed, Briscoe & Hall 2.
26-5n-8w McCaughtry, Carter Oil 5.
11-4n-8w Williams, Magnolia Pet. 2.
36-4n-8w Unknown, Emerald Oil 1.
Beckham County—
30-8n-22w Richardson, W. R. Duke 1.
Caddo County—
6-5n-9w Culp, Briscoe & Hall 5.
Love County—
12-9s-1e Gray, Smyer & Stein 1.
Wells Drilling and Shut Down
(Wells shut down indicated by an *)
Grant County—
26-27-4w Bohan, Wilson & Gloyd 1*.
2-27-3w Webb, Marland Oil 1.
14-27-3w Howell, Western States 1*.
22-27-3w Stewart, Western States 4-A*.
23-27-3w Flood, Marutan Fuel Co. 1*.
27-27-3w Land, Western States 1*.
Wicke, Blackwell O. & G. 1.
22-27-3w Lane, Blackwell O. & G. 2-A.
23-27-3w Crouch, Blackwell O. & G. 2.
Ellis County—
32-24-24w Meehan, Utility O. & G. 1*.
Major County—
36-22-14w Cheyenne Basin, Texas Prod. 1*.
36-21-11w Gray, Frantz & Slick 1*.
Dewey County—
7-15-15w Chronister, Meyers et al 1*.
25-16-15w Elders, A. D. Morton 1*.
Logan County—
28-18-4w Moore, Franklin Oil Assn. 1*.
33-18-3w Quier, Haley & Pioneer Pet. 1*.
9-18-2w Wyatt, Behoma Oil 1*.
21-16-2w Donahue, J. L. Donahue et al 1.
28-16-1w Lair, Blackford O. & G. 1*.
Blaine County—
21-15-10w Eklemeir, Okoma Oil 1*.
Kingfisher County—
17-15- 6w Creaves, Chi Oil Co. & Nicholas 1*.
Oklahoma County—
9-14- 1w Miller, Maxine Pet. 1.
Canadian County—
34-13- 9w Dawson, Thomas Revelle 1*.
2-13- 8w Setter, Carrol & Zweicher 1*.
29-11- 7w Sanders, O. D. Jones 1*.
Pottawatomie County—
13-11- 3e Floyd, Gwinnup et al 1*.
3-11- 6e Allenbaugh, The Texas Co. 1.
26-11- 4e Kline, Sikes, Kilgore & Shaffer 1.
25-10- 4e Midgett, Pierce Oil 1*.
28-10- 4e Toney, Central Natl. Oil 1*.
24-8n- 4e Stoner, Maude Oil Prod. Co. 1*.
15-7n- 4e Standridge, Darby Pet. 1.
19-7n- 4e Neghan, McMann Oil 1.
18-7n- 5e Rowe, Magnolia Pet. 1.
10-6n- 2e McCahey, David Detrick 1*.
4-5n- 5e Fiddler, Halmond Osmond et al 1*.
Cleveland County—
31-10- 4w Holland, Garr Oil 1*.
Beckham County—
24-9n-25w Unknown, W. H. Sheldon 1.
35-9n-25w Brown, Steve Nelson 1.
6-9n-24w Burkholder, J. A. Pringle 1*.
4-8n-25w Roberts, Magnolia Pet. 1*.
25-8n-22w McGee, W. R. Duke, 1*.
Caddo County—
8-8n-11w Foster, Crane & Smith 1*.
29-5n-12w Galbreath, W. J. Hartley et al 1*
3-5n- 9w Burbeck, Magnolia Pet. 6.
12-5n- 9w Royce, Diamond Drlg. Co. 1.
Grady County—
21-8n- 7w Webb, Watchorn O. & G. 1*.
23-5n- 8w Edmondson, Skelly Oil 1*.
25-5n- 8w Hill, Magnolia Pet. 2.
Reed, Nicholas Drlg. Co. 2.
34-5n- 8w Scott, Carter Oil 1.
35-5n 8w Smith, Magnolia Pet. 3.
14-5n- 7w Kiefe, Lugenbeal et al 1.
16-4n- 6w Bryant, Carter Oil 1.
26-4n- 6w Fursley, Carter Oil 1.
5-3n- 5w Gardenhire, Carter Oil 1.
21-3n- 5w Kerns, Joe Ray 1.
35-3n- 5w Lindsey, Carter Oil 2.
Kiowa County—
13-7n-16w Unknown, Alcorn Oil 1.
20-7n-16w Williams, Conner et al 1.
Comanche County—
16-4n-12w Unknown, Jackson & Rymer 1.
3-3n-10w Hallum, Becker et al 1.
16-2n-15w Unknown, Hyleca Oil 1*.
24-2n-10w Cox, Cherry & Couch 1-A.
32-2n- 9w Munson, Geo. Hanbury 1.
29-1n-12w Bentley, Bentley et al 1*.
Jackson County—
36-2n-23w Unknown, J. D. Wade 1.
15-1s-23w Snodgrass, J. R. Abernathy 1.
19-3s- 7w Keith, Day Oil 1*.
25-4s- 6w Howard, Pure Oil 1.
21-5s- 6w Casey et al 1*.
34-5s- 6w Major, Barker et al 1*.
36-5s- 4w Woodwarth, Godley Oil 1.
4-6s- 5w Brown, Ely et al 1*.
11-6s- 5w Rose, Riverside Oil 1*.
18-6s- w Grayson, Seaboard Oil 1*.
33-6s- 5w Seay, Gypsy Oil 3.
Seay, Humble-Hambro Oil 4.
34-6s- 5w Indian, Humble-Hambro Oil 3.
34-6s- 5w Seay, Carter Oil 4.
29-6s- 4w Reid, Comden Oil 1.
4-7s- 5w Seay, Couch et al 1.
18-7s- 5w Busby, Humble O. & R. 2.
Tillman County—
13-1n-19w Smith, Otter Creek Oil 1*.
16-3s-18w Unknown, Penn-Western Oil 1.
6-4s-15w Dunbar, Williamson & Wilson 1.
1-5s-15w Unknown, C. A. Hogan et al 1*.
Atoka County—
28-2s- 9e Underwood, Wapanucka Dev. Co. 1*.
17-4s-11e Dabney, Hanson et al 1*.
Marshall County—
17-5s- 5e Sacra, Kennedy Drlg. Co. 1*.
Love County—
11-7s- 2e Wilson, Driller Synd. Co. 1*.
13-8s- 2e Crowe, Magnolia Pet. 1.
Bryan County—
26-7s-11e Hampton, Alexander 1*.
Latimer County—
7-5n-18e Hunt, P. & F. Pet. 1.
10-6n-21e Young, J. S. Cochran 1.
Pittsburg County—
29-6n-13e Townsend, E. T. Richards 1*.
24-7n-13e Brown, J. J. Deaner 1.
Haskell County—
27-9n18e Curry, J. D. Clark 1*.
LeFlore County—
13-9n-24e Straun, Rogers Dev. 1*.
Sequoyah County—
33-11n-25e Powell, Eureka Oil 1.
Rigs, 14; wells drilling 100; total, 114.

KANSAS FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Anderson	32	1,682	6	0
Butler	19	1,370	3	0
Elk and Chautauqua	21	680	8	2
Cowley	30	4,786	13	1
Greenwood	67	6,852	30	1
Woodson	11	140	7	2
Miscellaneous	33	1,170	21	0
Total August	213	16,680	77	5
Total July	255	25,919	70	6
Difference	42	9,239	7	1

Summary of Rigs and Wells Drilling

County—	Rigs	Drg.	Ttl.
Butler	7	44	51
Chautauqua and Elk	6	20	26
Cowley	17	69	86
Greenwood	43	96	139
Montgomery	0	20	20
Russell	9	20	29
Sedgwick	1	8	9
Sumner	1	14	15
Woodson	0	10	10
Miscellaneous	16	92	108
Total August	99	392	492
Total July	96	394	490
Difference	3	1	2

ANDERSON COUNTY

33-21-19 Melville, Radio Oil 1 ..... dry
21-22-19 Roy, Graham & Long 4 40
16-23-18 Harris, W. S. Fees 4 50
Harris, W. S. Fees 5 ..... 5e
7-21-21 Mulker, J. P. Brady et al 3.. 40
15-20-21 Ware, Albert H. Keys 21 ... 50
8-21-21 Webber, Southwestern Pet. 4 55
7-21-21 Webber, Fleming & Bedford 1 30
8-21-21 Badders, G. D. Whiteside 4 ... 10
16-21-21 Hanley, Percy R. Pyne Jr. 3.. 60
6-21-20 Manners, W. L. Parmenter 15.. 35
32-20-20 West, Burge et al 1 ..... dry
17-21-20 Starritt, Southwestern Pet. 13 35
8-21-20 Starritt, Southwestern Pet. 14 35
7-21-20 Johnson, G. D. Whiteside 5 .. 32
Johnson, W. S. Fees 8 45
18-21-20 Sobba, G. D. Whiteside 5 110
14-21-19 Carr, Gooch-Denton Pet. 2.... dry
8-21-21 Webber, Southwestern Pet. 5. 150
15-21-20 Ware, Pioneer Mutual Oil 8.. 130
8-21-21 Webber, Southwestern Pet. 6 125
Badders, G. W. Whiteside 5.. 90
17-21-20 Starritt, Southwestern Pet. 15 75
16-21-20 Hunley, Percy R. Pyne, Jr., 4. 100
7-21-20 Melcher, T. W. Reid et al 7.. 50
31-20-20 Bowman, Gt. Western Denver Syn. 11 ..... dry
17-21-20 Starritt, Southwestern Pet. 16 60
7-21-21 Johnson, W. S. Fees 9 80
7-21-20 Johnson, G. D. Whiteside 6.. 60
14-21-19 Chitwood, J. W. Earl 3..... dry
18-21-21 Cook, Carillo Bros. 1 .... dry
7-21-21 Webber, Fleming & Bedford 2 45
Wells completed 32
Production 1682
Dry 6

BUTLER COUNTY

20-25-5e Finney, Empire G. & F. 26.. 200
30-25-5e Murray, Empire G. & F. 26.. 240
29-26-8e Drum Bitler, John Rogers 1.. 35
26-23-4e Ferrier, Callahan, Dingee et al 1 ..... dry
12-24-3e Powell, Vickers et al 1 350
30-25-5e Murray, Empire G. & F. 25.. 20
19-25-5e Hazlett, Port Fleeger et al 19 30
Hazlett, Port Fleeger et al 18 40
Hazlett, Port Fleeger et al 17 30
Hazlett, Port Fleeger et al 21 20
Hazlett, Port Fleeger et al 20 30
Hazlett, Port Fleeger et al 23 60
Hazlett, Port Fleeger et al 22 40
25-25-4e Betts, Conley et al 2..... dry
10-25-5e Nuttle, L. L. Davidson et al 1 dry
10-26-4e Ralston, Penn-Kansas Oil 9.. 50
20-26-8e Drum Bitler, Tidal Oil 1 20
19-27-6e Van Winkle, Skelly Oil 4 15
35-22-9e Shambaugh, Selby O. & G. 3 150
Wells completed 19
Production 1370
Dry 3

ELK AND CHAUTAUQUA COUNTIES

18-31-10 Wilson, B. L. Love 1 ..... dry
34-29-12 Weirman, Theta Oil 1 ..... gas
3-30-9e Tate, Conley et al 1 125
14-31-10 Webb, Southwestern Gas 4.... 75
21-30-11 Fleak, York State Oil 3..... dry
21-31-9e Stiles, Anderson et al 1..... dry
12-29-8e Porter, C. E. Roth & Co. 10.. 75
3-30-9e Mullendore, C. A. Connelly 1 10
18-30-10 Donnel, Vandavanter et al 1.. dry
25-23-11 O'Neil Ranch, Rigdon & Bruen 135 50
O'Neil Ranch, Rigdon & Bruen 135 50
O'Neil Ranch, Rigdon & Bruen 136 75
28-32-10 McAllister, John Croft et al 1 25
20-30-12 Potter, Knuckles et al 1 ..... dry
22-31-10 Webb, C. C. State et al 1.... dry
21-31-11 Curtiss, R. G. Gillespie 1.. dry
26-34-11 Brown, The Prairie O. & G. 9 gas
1-33-8e Reed, Hatlock et al 1 ..... dry
13-31-10 Webb, Pure Oil 4 20
14-31-10 Chaffine, Pure Oil 5 50
Wells completed 21
Production 680
Dry 8
Gas 2
Gas production 4,000,000

COWLEY COUNTY

10-31-3e Shaffer, Trees Oil 4..... 25
10-33-3e Bowers, Marland Oil 6 125
Spruen, Roxana Pet. 6 125
20-33-3e Dora Johnson, Waite Phillips & Marland 5 97
Wertman, Waite Phillips & Marland 15 300
Wertman, Waite Phillips & Marland 16 340
10-33-3e Spruen, Roxana Pet. 1-A.... 70
17-31-6e Harris, Southwestern Pet. 1.. dry
7-32-5e Crosley, Arkansas Fuel Oil 4 dry
34-32-4e Poor Farm, W. M. McKnab 1 dry
20-33-5e DeVore, S. A. Murphy 1..... dry
35-34-3e DeBard, Norton et al 1..... dry
20-34-4e Jarvis "A," Joe Nathan et al 1 ..... dry
15-30-4e Newton, Shawver & Sutter 4.. 40
30-30-6e Faust, White Eagle O. & R. et al 2 ..... dry
28-31-4e Emery, Tyree Oil 1 90
30-31-5e Jarvis, C. E. Roth et al 1.. gas
24-32-4e Detmer, J. A. Hull et al. 8.. 75
Wallace, J. A. Hull et al 9.. 300
10-33-3e Nixon, Gypsy Oil 1 30
20-33-3e Nelson, W. Phillips & Marland 6 695
21-33-3e Nelson, W. Phillips & Marland 7 1139
7-34-3e Tuttle, W. Phillips 1 ..... dry
31-30-6e Crouch, Titus et al 4 ..... dry
22-32-6e Guthrie, Wakefield et al 1... dry
10-33-3e Wright, Marland Oil 4 ..... dry
20-33-3e Nelson, W. Phillips & Marland 4 600
21-33-3e Synder, W. Phillips & Marland 5 200
1-33-4e Bills, Lewis Oil 1 ..... dry
17-35-7e Fall City, Phillips Pet. 25.... 35
Wells completed 30
Production 4786
Dry 12
Gas 1
Gas production 5,000,000

GREENWOOD COUNTY

13-22-10 Derbyshire, Pryor & Lockhart 5 120
17-22-10 Brownning, Theta Oil 11 40
32-22-11 DeMalorie "C," York State Oil 6 300
33-22-11 Greenwood, Jennings et al 6.. 75
24-23-8e Scott, Empire G. & F. 3.... 400
10-23-9e Green, Greenland Oil 11 400
11-23-9e Green, Sheedy et al 4 60
30-23-9e Dales, Mission Oil 2 35
1-24-9e Marshall, Arkansas Fuel Oil 11 15
12-25-8e Burkett, Roth & Faurot 6 50
29-22-10 Prather, Titus et al 6 400
29-22-11 Pees, Phillips Pet. 11 50
33-22-11 Hillard-Bradden, Phillips Pet 5 25
27-22-13 Miller, Braden Bros. 3..... 10
25-23-8e Scott, Robertson, Hayes et al 2 350
Scott, Robertson, Hayes et al 3 350
11-23-9e Green, McGinnis & Bittler 16. 100
19-23-9e Morris, Mission Oil 1 400
30-23-9e Dales, Mission Oil 1 200
23-23-10 Allen, Mid Kansas Oil 22.... 130
28-23-10 Thrall, C. E. Roth & Mission Oil 5 50
31-23-10 Martindale, Mid Kansas Oil 30 100
8-23-11 Holland, Pulaski Oil 5 50
14-24-12 Sullivan, Houston Okla. Oil 12 10
31-25-13 Souder, C. & C. Leasing Co. 5 15
1-22-11 Voorhees, Noble Oil 1 ..... dry
12-22-11 McGilvrey, White Eagle Oil 6 dry
2-23-9e Shambaugh, Skelly Oil 5..... dry
Green, Transcontinental Oil 11 dry
21-24-11 Tanhill, Redgraves et al 1.. dry
15-24-12 Fleming, Skelly Oil 3 ..... dry
31-24-12 Kaub, Dewey & Dean 1 ..... dry
6-25-13 Gilroy, Bisagno et al 7..... dry
19-22-11 Harris, Simmons & Burke 1.. dry
2-23-10 Rose, Phillips Pet. 1 ..... dry
22-23-10 Tucker, Roth & Mission 3.... dry
19-23-13 Jenson, Buck et al 1 ..... dry
14-26-9e Burkett, Beacon Oil 1 ..... dry
12-22-10 DeMalorie, Davis Hazlett et al 6 75
13-22-10 Kipfer, Skelly Oil 4 35
11-22-11 Kipfer, Empire G. & F. 5.... 400
12-22-11 Green, Empire G. & F. 2..... 300
19-22-11 Greenwood, T. K. Simmons et al. 1 195
24-23-8e Scott, Empire G. & F. 1 475
15-23-9e Teter, Skelly Oil 8 300
19-23-9e Morris, Mission Oil 2 400
29-23-13 Bayes, Ark. Fuel Oil 14 15
35-24-8e Lampe, Joe Nathan 1 ..... dry
1-24-9e Cartwright, Roth & Mission 9 15
7-24-12 Thrall, Enterprise Dev. 1.... 30
21-24-12 Johnson, Polhamus & Ark. Fuel Oil 2 30
19-25-9e Ladd, Mid-Kansas Oil 1 150
20-25-9e Ladd, Mid-Kansas Oil 4 125
26-26-10 Cochran, Hargraves et al 1.. dry
16-24-10 Blackwell, Prairie O. & G. 1.. 5
13-22-10 Kipfer, White Eagle O. & R. 4 15
11-22-11 Kipfer, Tidal Oil 4 40
12-22-11 McGilvrey, White Eagle O. & R. 7 ..... dry
27-22-13 Miller, R. G. Gillespie 2..... 5
25-23-8e Dales, Mission Oil 3 400
10-23-9e Green, Greenland Oil 12 70
34-24-9e Marshall, Polhamus et al 10.. 60
6-24-11 Freeman, Sullivan et al 1.... dry
36-25-12 Boone, C. & C. Leasing Co. 2.. gas
22-26-9e Prather, Magnolia Pet. 1 ..... dry
26-24-12 Long, Fisher, Lauck & Moore 1 dry
36-23-12 Hennebaker, Kettle et al 1.... dry
Wells completed 67
Production 6852
Dry 20
Gas 1
Gas production 2,000,000

WOODSON COUNTY

23-23-13 Hessler, Marland & Christy 8 30
2-24-14 Allen, Iowa-Kansas Dev. 1.... 60
26-23-14 Reed, Iowa-Kansas Dev. Co. 1 dry
30-23-15 Reddick, Iowa-Kansas Dev. 1 dry
1-24-14 Stockerbrand, Iowa - Kansas Dev. 2 ..... dry
13-25-13 Leiban, Lassen & Davis 1.... dry
14-25-13 Black, Greene, Davis et al 2.. dry
22-25-14 Rhea, Curtiss et al 1 ..... gas
1-24-14 Stockerbrand, Iowa - Kansas Dev. ..... dry
23-26-14 Louk, Stilts, Aikman et al 1. 60
15-25-14 Quigley, Curtis et al 1 ..... dry
Wells completed 11
Production 140
Dry 1
Gas 1
Gas production 2,500,000

MISCELLANEOUS COUNTIES

Bourbon County—
17-24-22 Pendergast, Leonard & Harris Co. 1 ..... dry
Pendergast, Leonard & Harris Co. 2 ..... dry
Chase County—
35-22-9e Shambaugh, Selby Oil 2 350
Franklin County—
4-18-21 Rust & Reseberry, J. A. Vanhorn 3 ..... dry
Rust & Reseberry, J. A. Vanhorn 1 ..... dry
Kingman County—
34-27-7w Graber, Port Fleeger et al 1.. dry
Labette County—
1-34-17 Barents, Jesse Graham 5..... 5
1-35-17 Bagsley, Shaffer Refg. 8..... 250
Lyon County—
32-21-12 Perdroja, Landon et al 2.... dry
4-19-13 Schultz, Jackson & Moreland 1 dry
33-21-12 Wilhite, Phillips Pet. 1 ..... dry
32-21-12 Childers, Schwarts et al 2... 30
Marion County—
5-22-4e Townsend, Watchorn O. & G. ..... dry
16-22-5e Jansion, Phillips Pet. 1 ..... dry
4-22-4e Jolliffe, Watchorn O. & G. 9 50
Montgomery County—
13-32-15 Love, Beeler et al 1 ..... dry
18-31-17 Shanton, Zula H. Beets 5 ... 10
Neosho County—
30-27-19 Bruner, J. S. Wenkler 5 5
Burghart, J. S. Wenkler 5 .. 5
34-28-20 Simmons, Kimball et al 1..... 3
9-28-19 Wells, H. H. McCall 12 5
Wells, H. H. McCall 13 5
Russell County—
8-12-15w Oswald, Streeter & Stearns 4. 450
Sedgwick County—
11-26-1e Funk, J. H. Liggett 1 ..... dry
Sumner County—
14-35-1e Hartsell, National Ref. 1..... dry
22-34-2e Lindsey, Marland Oil 1 ..... dry
12-30-4w Smith, Phillips Pet. 1 ..... dry
16-34-1e Stewart, Gypsy Oil 1 ..... dry
17-34-1e Armspleger, Phillips Pet. 1 ... dry
12-35-1e Nixon, The Texas Co. 1 ..... dry
Trego County—
16-11-24w Davis, Keys Bros. & Marine Oil 1 ..... dry
Wilson County—
12-27-16 Nelson, Brady, Hoff & McCullough 2 ..... dry
Harvey County—
13-23-2e Sooby, Phillips Pet. 1 ..... dry
Wells completed 33
Production 1170
Dry 21

BUTLER COUNTY

Rigs

12-24-3e Powell, Vickers et al 2.
13-25-3e Wilson, Skelly Oil Co. 1.
10-25-5e Nuttle, Gabie Franks 1.
32-26-6e Schriber, Foraker Oil Co. 1.
29-26-8e Drum Bitler, John Rogers 2, 3.
Drum Bitler, Cowpuncher Oil Co. 1.

Wells Drilling

33-23-3e Rutchman, Connell et al 1.
4-23-6e Nelson, E. B. Merrian 1.
12-24-3e Ogden, Phillips Pet. Co. 1.
Hinman, Gypsy Oil Co. 1.
Gruber, Marland & Connell 1.
21-24-3e Harder, Hoyt et al 2.
35-24-3e Branard, Vickers & Sanfords 1.
27-24-7e Hill Est., Winters & Harwood 1.
Holdridge, Winters & Harwood 1.
7-24-8e Henley, Winters & Harwood 1.
9-24-8e Henley, Abel & Rhodes 1.
18-25-4e Joseph, Bement Oil Corp. 1.
8-25-5e Wilson, Empire G. & F. Co. 155.
24-25-7e Jones, Joe Liggett et al 1.
30-25-7e Liggett, Transcontinental Oil 1.
32-26-5e Sparks, Lenard Pet. 1.
21-26-6e McMahan, J. K. Wilson et al 1.
32-26-6e Schenrock, Mason & Ralston 1.
32-26-6e Webber, Lewis Oil 1.
23-26-7e Blankenship, Neely O. & G. 1.

29-26-8e Drum Bitler, Hinkle et al 1.
Drum Bitler, Tom Miller 1.
30-26-8e Drum Bitler, Davis et al 1.
6-27-4e Bump, Miller Bros. et al. 1.
26-27-4e Safford, Safford et al 6.
15-27-4e Skeer, Empire G. & F. 12.
5-27-6e Beedles, Branson et al 1.
16-27-6e Reynolds, Phillips Pet. 1.
22-27-6e Stearns, Wentz et al 1.
22-27-7e Tobler, O. A. Boyle et al 1.
7-27-7e Seward, G. G. Ray et al 1.
15-28-7e Sensenbaugh, Atlantic Oil Prod. 1.
14-29-3e White, Dingee, Callahan & Phillips Pet. 1.
4-29-5e Guyot, Ramsey et al 1.
12-29-6e Lemenyon, Tobins et al 1.
33-29-8e Hanna, Roth & Co. 6.

Shut Down

31-23-8e Walkins, Morgan & Moore 1.
36-24-4e Barkmeyer, Robinson et al 1.
18-24-5e Joseph, Knightlinger et al 1.
30-24-8e McClellian-Fuller, Mid-Kansas O. & G. 1.
12-26-5e Cowles, Frank Allen & Steiner 1.
32-26-6e Palmer, Sparta Drlg. 1.
24-27-4e Weldine, Weldine et al 1.
32-28-6e Pettitt, John Sharp 1.
Rigs, 7; wells drilling, 44; total, 51.

CHAUTAUQUA AND ELK COUNTIES

Rigs

16-32-12 White, Southwestern Gas 5.
16-33-9e Clifford, Orlando Pet. 1.
10-34-9e Fisher, T. B. Slick 3.
12-29-8e Hanna, Roth & Co. 3.
11-31-9e McGlasson, Watchorn O. & G. 1.

Wells Drilling

3-32-8e Westerfield, Mid-Kansas O. & G. 1
16-34-9e Kinman, J. A. Brouck et al 1.
34-34-12 Hillman, Ludowici-Celadon 6.
28-28-11 Gibson, Sharples et al 1.
12-29-10 Porter, Roth & Co. 11.
35-29-12 Steel, Theta Oil 1.
3-30-9e Denton, Watchorn O. & G. 8.
21-30-11 Fleck, York State Oil 2.
30-30-11 Pickle, Pennok Oil 1.
21-31-9e Stiles, Tripplett Oil 2.
28-31-9e Crowthers, Glainman & King 1.
13-31-10 Webb, Pure Oil 5.
14-31-10 Leffingwell, Southwestern Gas 2.
Webb, Southwestern Gas 3.
25-31-11 Pralle, Abel & Byrington 1.

Shut Down

36-32-8e Hayhurst, R. M. Galer et al 1.
24-33-9e Anderson, D. R. Renfru et al 1.
5-33-10 Humphrey, Dunn et al 1.
5-33-13 Fish, Garner et al 1.
21-29-9e Smith, Anderson Bros. 3.
Rigs, 5; wells drilling 20; total, 25.

COWLEY COUNTY

Rigs

1-30-7e McHanna, Ark. Fuel Oil 1.
10-31-3e Smith, Trees Oil 3.
Shaffer, Thomas & Trees 5.
11-31-3e Clark, Ark. Fuel Oil 2.
28-32-3e Hoverstock, Miss. Valley Oil 1.
23-32-4e Rockwell, J. A. Hull 1.
24-32-4e Detmer, J. A. Hull 9.
6-32-5e Dudgeon, Ark. Fuel Oil 3.
7-32-5e Grimsby, Ark. Fuel Oil 5.
19-32-5e Boyd, Duffield et al 1.
16-33-3e H. Thurlow, W. Phillips & Marland 5.
17-33-3e H. Thurlow, W. Phillips & Marland 4.
21-33-3e E. Nelson, W. Phillips & Marland 10, 11, 12, 14.
W. Snyder, W. Phillips & Marland 5.

Wells Drilling

2-30-5e Morgan, Connell & White Eagle 1.
16-30-5e Billiter, Patterson & Crosby 1.
31-30-6e Robbins, Lewis Oil 6.
33-30-7e Simons, Milner-Hershey et al 1.
20-31-5e Bement, Roth et al 1.
11-31-3e Clark, Ark. Fuel Co. 3.
32-31-3e Grant, S. A. Murphy et al 1.
20-31-5e Bement, Roht et al 1.
13-31-7e Brown, Empire G. & F. 3.
8-32-3e Wilson, Ark. Fuel Oil 1.
19-32-3e Waite, Carter Oil 6, 7.
Carson "B," T. B. Slick 2, 4, 5.
Waite "B," T. B. Slick 1.
20-32-3e Carson, T. B. Slick 1.
23-32-4e Rockwell, J. A. Hull 2.
24-32-4e Kukuk, J. A. Hull 12.
Wallace, J. A. Hull 10.
19-32-5e Barlow, J. A. Hull 1.
9-33-3e Graham "A," Marland Oil 3.
10-33-3e Bowers "A," Marland Oil 1.
Wright, Marland Oil 3.
17-33-3e Thurlow, W. Phillips & Marland Oil 2, 3.
19-33-3e Bates, W. Phillips & Marland Oil 2.
Holman, Marland Oil 1.
Hoskins, Marland Oil 2.
20-33-3e Nelson, W. Phillips & Marland Oil 5, 8, 9.
21-33-3e Snyder, W. Phillips & Marland 4, 6, 7, 8.
W. Snyder, W. Phillips & Marland 1, 2, 3.
Hunt, Marland Oil 1.
Hunt, Gypsy Oil 1.
28-33-3e Allison, W. Phillips & Marland 2, 3.
Caldwell, W. Phillips & Marland 3, 4, 5, 6, 7, 8, 9, 10.
Wright, Phillips Pet. 1, 2.
16-33-6e Bain, Terrell et al 1.
31-33-6e Speers, Miss. Valley Oil 1.
6-33-8e Shaffer, Phillips Pet. 1.
22-34-3e Kimmel, Roxana Pet. 1.
8-35-4e Bush, T. B. Slick 1.
16-35-4e Hollingsworth, Muddy Oil 1.
5-35-5e Sterling, Springstead & Overlease 1.

Shut Down

14-30-6e Hulmes, Gray & Maxey et al 1.
24-30-6e Ward, Chas. Christy 1.
4-31-6e Elliott, Boxer et al 1.
6-31-6e Eastman, Gardner et al 1.
29-32-7e Bronson, W. H. Hammill 1.
4-33-7e Countryman, Forrester et al 1.
17-34-3e Chenoweth, Elwell et al 1.
15-34-4e Pollock, Bunnell et al 1.
7-34-8e Sawer, McKnab et al 1.
Rigs, 17; wells drilling, 69; total, 86.

GREENWOOD COUNTY

Rigs

17-22-10 Browning, Theta Oil 12.
20-22-10 Browning, Sinclair Oil 25.
24-22-10 Curry, White Eagle O. & R. 1.
30-22-10 Browning, Titus et al 2.
1-22-11 Voorhees, Noble O. & G. 2.
19-22-11 Greenwood, Empire G. & F. 1.
29-22-11 Pees, Phillips Pet. 2.
30-22-11 Coffman, Pryor & Lockhart et al 1.
32-22-11 O'Neil, York State Oil 8.
32-22-11 Braden-Hillard, Phillips Pet. 6.
Hilliard, Phillips Pet. 3.
24-23-8e Scott, Empire G. & F. 5.
25-23-8e Scott "B," Greenland Oil 2.
Scott, Robertson, Hayes et al 7.
2-23-9e Shambaugh "C," Greenland Oil 2. 3.
Shambaugh, Skelly Oil 6.
10-23-9e Green, Greenland Oil 13.
Green, Greenland Oil 16, 17.
11-23-9e Green, Sheedy et al 6.
16-23-9e Teter, Empire G. & F. 29.
19-23-9e Morris, Mission Oil 4.
Morris, Phillips Pet. 3.
20-23-9e Zimmerman, Phillips Pet. 1.
21-23-9e Teter, Minnehoma Oil 2.
23-23-10 Allen, Mid-Kansas O. & G. 15, 26.
28-23-10 Thrall, Roth & Mission 56.
29-23-10 Thrall, Roth & Mission 23.
9-23-11 Tiffany, T. K. Simmons 2.
Phillips, White Eagle & McGinnis 1.
1-24-9e Cartwright, Roth & Mission 10.
31-24-9e Claycomb, Bascom et al 1.
15-24-12 Johnson, Franklin Oil 5.
31-24-13 Cornish, Christie et al 2.
11-25-8e Olson, Roth & Faurot 1.
3-25-9e Hover, National Ref. Co. 2.
10-25-9e Robbins, Polhamus et al 1.
19-25-9e Ladd, Mid-Kansas O. & G. 2.
28-26-13 Ingersoll, Maitland Oil 1.
24-26-9e Weirshing, Beacon Oil 2.
12-22-10 Warrensburg, Phillips Pet. 4.

Wells Drilling

30-23-9e Dales, Prairie O. & G. 1.
1-22-10 Fuller, Syndicate Oil 1.
11-22-10 Green, Ritchey & Moore 1.
12-22-10 DeMalorie, Davis Hazlett et al 7.
Warrensburg, Phillips Pet. 3.
19-22-10 Browning, Sinclair Oil 22.
20-22-10 Browning, Sinclair Oil 19, 26.
29-22-10 Prather, The Texas Co. 1.
Prather, Titus et al 11.
30-22-10 Prather, Titus Oil et al 7, 10.
7-22-11 DeMalorie, Davis Hazlett et al 6.
11-22-11 Kipfer, Empire G. & F. Co. 6.
12-22-11 McGilvrey, White Eagle O. & R. 8.
14-22-11 Fromme, Empire G. & F. 5.
Hood, Empire G. & F. 1.
15-22-11 Greenwood, Empire G. & F. 1.
19-22-11 Harris, "B," Simmons et al 1.
29-22-11 DeMalorie, York State Oil 1.
30-22-11 Coffman, Phillips Pet. 1.
32-22-11 DeMalorie "C," York State Oil 13.
33-22-11 Westcott, York State Oil 7.
27-22-13 Miller, Braden Bros. 4.
13-23-8e Spiker, Roth, Faurot & Murphy 1.
24-23-8e Scott, Empire G. & F. 3, 4.
25-23-8e Taylor, Greenland Oil 1.
Scott, Robertson, Hayes et al 4, 5, 6.
35-23-8e Mosby, White Eagle O. & R. et al 1
36-23-8e Burk, Sinclair Oil 1.
2-23-9e Green, J. B. Murphy 7.
Shambaugh "B," Greenland Oil. 3, 5.
3-23-9e Noier, Phillips Pet. et al 2.
7-23-9e Morris, Pryor & Lockhart 1.
8-23-9e Morris, Tidal Oil 1.
10-23-9e Green, Greenland Oil 10, 14, 15.
11-23-9e Green, Sheedy et al 5.
16-23-9e Teter, Skelly & Emerald 5.
16-23-9e Teter, Empire G. & F. 27.
19-23-9e Morris, Mission Oil 3.
Morris, Phillips Pet. 1, 2.
Norman, Phillips Pet. 1.
Morris, White Eagle & McGinnis 1.
20-23-9e Margaret, Phillips Pet. & Skelly Oil 1.
22-23-9e Teter, Davis Hazlett et al 1.
36-23-9e Teter, Darby & Simons 2.
16-23-10 Hollis, Mission Oil 1.
19-23-10 Pace, Roth & Mission 1.
23-23-10 Allen, Mid-Kansas O. & G. 24, 25.
27-23-10 Thrall, "B," Roth & Mission 2.
31-23-10 Martindale, Mid-Kansas O. & G. 29, 31, 32.
8-23-11 Oliver, Pure Oil 1.
13-23-13 Souder, Ark. Fuel Oil 1.
1-24-9e Cartwright, Roth & Mission 11
Marshall, Ark. Fuel Oil 12.
27-24-9e Edie, Polhamus et al 2.
8-24-10 Holderman, Mid-Kansas Oil 1.
23-24-10 Edwards, Jno. Edwards et al 1.
19-24-11 Freeman, Paul Smith et al 1.
29-24-11 Wiggins, Murphy et al 1.
30-24-11 Wiggins, Ward McGinnis 1.
Wiggins, The Texas Co. 1.
31-24-11 Warner, Peerless Oil et al 1.
15-24-12 Fleming, Skelly Oil 1.
8-25-9e Diebert, Mid-Kansas Oil 7.
Diebert, Polhamus et al 7.
9-25-9e Gregg-Coulter, Rogers et al 1.
30-25-9e Hoffman, Mid-Kansas Oil 7.
11-25-10 Thrall, Reser et al 1.
14-25-10 Norman, John Jackson 1.
9-25-11 Christy, Foster & Emerald 2.
20-25-11 Garrison, R. T. Parkins et al 1.
5-25-13 Gressort, Lewis, Sandow et al 1.
23-26-9e Mills, Flint Ridge & Baker 1.
8-27-10 Neibrecht, Morgan et al 1.
3-27-12 Freeman, Cosden Oil 1.
8-28-12 Crawford, Simms Oil 1.

Shut Down

33-22-10 Branaird, Rhodes & Abel 1.
32-22-11 DeMalorie "C," York State Oil 5.
15-23-9e Teter, Phillips Pet. 4.
16-23-9e Teter, Empire G. & F. 28.
23-23-10 Scott, "B," Roth & Mission 4.
27-24-9e Hill, Fontain et al 1.
5-25-10 Robinson, H. J. Wilson. 1.
27-25-11 Wilson, Cross Oil 1.
1-26-9e Edwards, Flint Ridge Pet. 1.
Rigs, 43; wells drilling, 96; total, 139.

MONTGOMERY COUNTY

Wells Drilling

23-33-14 Miller, W. F. Morgan et al 1.
11-33-16 Zutz, Wilkins et al 1.
30-33-16 Davis, J. E. Weigle et al 1.
9-34-14 Eaton, R. G. Gillespie 1.
28-34-14 Owens, Phillips Pet. 1.
31-34-15 Reed, Connelly et al 1.
5-35-15 Taylor, Keystone Oil 1.
12-35-16 Wilson, Tex-O-Kan Oil 1.

Shut Down

31-31-14 Faler, Ramler et al 1.
2-32-13 Neiman, Dunn et al 1.
35-32-14 Drybread, Irish et al 1.
5-32-16 Brinkman, T. R. Cowell 1.
35-32-16 Wyberg, Bloom et al 1.
29-32-17 Hellum, Earl & Overfield 1.
12-33-16 Painter, Superior Oil 1.
35-33-16 Felts, Voise & Tabor 1.
4-33-17 Hall, Townsell et al 1.
30-33-17 Bunk, Brown & Wolf 1.
1-35-16 City of Coffeyville, Ed Kerns 1.
4-35-17 Walker, Galloway & Roberts 1.
Rige, 0; wells drilling, 20; total, 20.

RUSSELL COUNTY

Rigs

5-12-15w Kollman, Muddy Oil 3.
Sutton, Derby Oil et al 8.
Sutton, Derby, Stearns & Yankey 3.
Kollman, Tom Johnson 3.
Brummitt, Carter Oil 1.
6-12-15w Tisbuer, Carter Oil 1.
7-12-15w Oswald-Valerius, Valerius O. & G. 8.
8-12-15w Oswald, Mid-West Refg. 3.
Oswald, Streeter & Stearns 6.

Wells Drilling

13-11-13w Pospishal, Krueger et al 1.
29-11-15w Abbott, Mid-West Refg. 31.
32-11-15w Booth, Mid-West Refg. 1.
Dodge, Derby, Streeter & Stearns 4.
5-12-15w Kollman, Muddy Oil 2.
Sutton, Derby Oil et al 6, 7.
Brummitt, Derby Oil 1.
Sutton, Valerius O. & G. 4, 5.
Kollman, Tom Johnson 2.
8-12-15w Oswald, Mid-West Refg. 31, 4.
Oswald, Valerius O. & G. 2, 4.
Oswald, Streeter & Stearns 5, 7.
17-12-15w Oswald-Valerius, Valerius O. & G. 7.
18-12-15w Oswald, Skelly Oil 2.

Shut Down

23-12-11w Dick, Ritchey & Moore 1.
Rigs, 9; wells drilling, 20; total, 29.

SEDGWICK COUNTY

Rigs

34-26-1e Jaden, Wichita O. & G. 1.

Wells Drilling

19-29-1w Duncan, Curtiss et al 1.
17-29-1e Elwell, Carr, Hartman & Skaer 1.
32-29-2w Hickinson, W. Phillips 1.
21-29-3w Webb, Allison & Fitzwilliams 1.

Shut Down

6-25-1e Poff, Boyle, Preston & Tack 1.
9-25-2e Harrison, Smith & Keller 1.
7-26-2e Mills, Lamson et al 1.
2-29-2e Fleming, Higgins 1.
Rigs, 1; wells drilling, 8; total, 9.

SUMNER COUNTY

Rigs

27-34-2e Norris, Marland Oil 1.

Wells Drilling

9-30-1w Stevenson, Champlin Refg. 1.
12-30-1e Waggoner, McKanna et al 1.
8-30-2w Lotta, Champlin Refg. 1.
36-30-2w Riner, Cosden Oil 1.
4-34-1w Welcher, Cosden Oil 1.
35-34-1w Roselle, Shawver et al 1.
22-34-2e Thelssen, Marland Oil 1.
23-34-2e Wisner, Marland Oil 1.
6-35-1e Milligan, Tidal Oil 1.
34-34-2e McEowen, Prairie O. & G. 1.

Shut Down

35-31-4w Stewarts, Sparta Drlg. Co. 1.
5-32-2w Stayton, Wilcox O. & G. 1.
21-33-2e Rutter, Roxana Pet. 1.
22-34-2e Mareau, Phillips Pet. 1.
Rigs, 1; wells drilling, 14; total, 15.

WOODSON COUNTY

Wells Drilling

23-23-13 Bahr, Empire G. & F. 7.
32-23-14 Headley, Pure Oil 13.
33-23-14 Headley, Iowa-Kansas Dev. Co. 1.
9-23-15 Guy, Spencer & Chambers 3.
2-24-14 Allen, Iowa-Kansas Dev. Co. 5.
14-25-13 Mason, McCann & Johnson 1.

Shut Down

13-25-14 Hunt, Alter et al 1.
4-26-14 Louder, Hesman & Oglesby 1.
13-26-14 Danields, Burford & Brimm 1.
29-26-17 Clark, Equity Oil 1.
Rigs, 0; wells drilling, 10; total, 10.

MISCELLANEOUS COUNTIES

Rigs

Chase County—
35-22-9e Shambaugh, Selby O. & G. 4.
Shambaugh, White & Huff 3.
36-22-9e Shambaugh, Mid-Kansas Oil 1.
Shambaugh, W. Phillips Co. 1.

Coffey County—
9-20-14 Jones, W. R. Wilson 1.

Comanche County—
23-31-18w Starlock; I. M. Rupard et al 1.

Graham County—
17-10-24w Baker, Gruen & Shriler 1.

Kingman County—
16-27-7w Richardson, Fleeger & Carter Oil 2.
4-30-6e Richardson, Ozark Drlg. Co. 1.

Lyon County—
16-21-10 Jones, Loy & Chaney 1.

McPherson County—
3-18-2w Anderson, Young et al 1.

Morris County—
32-14-7e Barber, Kine et al 1.

Ness County—
35-18-21w Ryersee, Bell & Sarton 1.

Pottawatomie County—
17- 9-12 Stewart, Crawford et al 1.
31- 9-12 Breischaber, Crawford et al 1.

Rice County—
2-19-10 Hollscher, Sparta Drlg Co. 1.

Wells Drilling and Shut Down
(Shut down wells indicated by *.)

Barber County—
14-34-11w Martin, B. B. Brown et al 1.

Barton County—
27-18-12w Sooy, Cheyenne O. & G. 1*.
31-18-12w Taul, Haynes & Taul 1*.
17-19-11w Smith, Huffine et al 1*.
23-18-13e Everelelge, John Herron 1.

Chase County—
19-19- 8e Holsinger, Alters et al 1*.
Kirk, H. D. Hover et al 1.
35-22- 9e Shambaugh, White & Huff 2.

Clark County—
20-32-21w Morrison, Watchorn O. & G. 1.

Clay County—
21- 9- 4e Younkins, Skow Bros. 1.

Cloud County—
6- 6- 4w Murdock, Concordia O. & P. 1.

Coffey County—
11-20- 1e Turner, Terrian & Belliere 1.

Decatur County—
25- 2-26w Reager, Marland Oil 1.

Edwards County—
7-23-19w Noberwell, Edwards County Oil 1*.

Ellis County—
16-11-17w Demis, Sparks et al 1.
14-13-18w Unrein, Ellis County Pet 1.
33-15-20w Murphy, Faler et al 1.

Ellsworth County—
24-14- 7w Walker, United Pet. Co. 1*.
6-14- 8w Kasper, John Herron et al 1*.

Franklin County—
17-16-19 Owens, Smith, Thrice & Fisher 1*

Geary County—
9-12- 6e Wright, Liberty Texas Oil 1*.
30-13- 6e Foster, Liberty Texas Oil 1*.

Graham County—
23- 8-24w Taxon, Keys Bros. & Marine 1*.

Hamilton County—
5-26-41w Ransom, Wood Oil 1*.

Harvey County—
27-22- 2e Symons, S. A. Hunter 1.
4-23- 2e Brandweide, Wentworth Bros. 1.
26-24- 2e Elmer, Connell & Gordon 1.

Hodgeman County—
19-21-22w Frizzell, Spencer & Marconnette 1.

Jefferson County—
13- 9-19 Edwards, Northern Counties Oil 1*.

Kingman County—
22-29- 6w Bane, Phillips Pet. 1.

Labette County—
14-31-17 Sparks, Ark. Fuel Oil 1*.
26-32-17 Wilkes, Ark. Fuel Oil 1*.
1-32-20 Thruman, Noble O. & G. 1*.
33-32-20 Burnes, W. C. Wiley et al 1*.
1-33-17 Hornbeck, T. R. Cowell et al 1*.
5-35-20 Lipe, Wantland et al 1*.

Lane County—
11-18-27w Dickinson, Richards Refg. 1*.

Lincoln County—
19-11- 6w Stone, Scott & Collins 1*.
22-11- 6w Lewis, Pope & Powell 1*.
36-13- 7w Paul, United Pet. 1*.
19-13- 9w Jellison, Equity Oil 1.

Logan County—
14-14-33w Moffett, Coone et al 1.

Lyon County—
31-20-11 Price, Ritchey & Moore 1.
25-21-10 Bradford, R. W. Tolbot 1.

McPherson County—
3-17- 2w Anderson, Wynn et al 1*.
29-18- 2w Anderson, Waugh & Casey 1*.
1-19- 5w Erickson, Transcontinental Oil 1.
21-20- 2w Linn, Krown & Krown 1*.

Marion County—
15-20- 5e Robinson, Miss. Valley O. & G. 1.
34-20- 5e Laloutte, Ramsey et al 1*.
17-21- 4e Waner, National Refg. 2.
32-21- 4e Equity, Morgan et al 1*.
5-22- 4e Townsend, Watchorn O. & G. 41.

Mitchell County—
11- 7-10w Kyle, Brown & Woodward 1.

Morris County—
21-17- 7e Welcher, Bowman & Jones 1*.
24-17- 9e Cessman, Rock Creek Oil 1.

Nemaha County—
19- 2-11e Meyers, Nemaha O. & G. Co. 1*.

Osborne County—
10- 7-12w Turner, H. A. Beasley 1.
9-10-14e Beeley, Knight et al 1*.

Osage County—
3-15-15e Lease, Baker et al 1*.
27-15-16e Bailey, West et al 1*.
8-17-17e Nell Est. Mull Vit Dev. Co. 1*.

Phillips County—
25-4n-16w Hull, Frost Drlg. Co. 1.
13- 5-16w McKinley, Good & Craine 1*.
15- 5-16w McQueen, Curtis & Frost 1.

Pottawatomie County—
11-10-12e St. Marys, Crawford et al 1*.

Reno County—
5-26- 4w Williams, M. K. Travis et al 1.
7-26- 7e Stevens, Frank Hopper et al 1.

Rice County—
10-18- 6w Walker, Jaeepr & Beschka 1.
1-19- 7w Deeds, Pryor & Lockhart 1*.
21-20- 6w Barnes, Stamey et al 1*.
21-20- 6w Johnson, Mid-Land Oil 1*.
35-20- 6w Welch, Hipple et al 1.
2-21- 6w Waiston, E. E. Youker et al 1.

Riley County—
26-10- 6e Marks, Pawnee O. & G. 1.
20-10- 7e Thierer, Youker & Douglas 1*.

Rooks County—
30- 6-17w Law, Marland Oil 1.
7- 8-20w Saindon, Keys Pet. 1*.
25-10-19w Minx, Findless et al 1.

Rush County—
10-18-16w Moore, Morgan & Downing 1*.

Saline County—
29-14- 2w Davis, L. S. Johnson 1*.
26-15- 2w Shelton, Brown & Woodward 1.
15-16- 4w Holmquest, Thrall et al 1*.

Stafford County—
23-21-11w Sifers, King & Langston 1*.
24-22-11w Richardson, Randall & Johnson 1*.

Trego County—
5-13-25w Welsch, Keys Pet. Co. 1*, 2*.

Wabaunsee County—
15-13-12 Henderson, Williams et al 1*.

Washington County—
9- 5- 5e Wickham, Barnes, O. & G. 1*.

Wilson County—
12-28-15e Mobley, O. W. Culp 1.
22-29-16e Thompson, Price et al 1*.
29-30-17e Smally, West & Williams 1*.
Rigs, 16; wells drilling, 92; total, 108.

NORTH CENTRAL TEXAS

District—	Comp.	Prod.	Dry	Gas
Wichita	69	2,310	30	8
Wilbarger	22	1,090	6	0
Archer	134	5,075	55	0
Young	79	2,305	10	0
Stephens	27	520	16	1
Eastland	10	385	5	0
Brown	12	695	3	1
Reagan	5	10,215	1	0
Wildcats	47	1,075	26	6
Total August	407	23,660	152	8
Total July	364	24,083	140	9
Difference	43	423	12	1

Summary of New Work

District—	Rigs	Dl. Wells	Tti.
Wichita	2	35	37
Wilbarger	3	86	89
Archer	14	65	79
Young	2	30	32
Stephens	9	36	45
Eastland	6	22	28
Brown	5	21	26
Reagan	4	27	31
Wildcats	32	138	170
Total August	77	460	537
Total July	77	408	485
Difference	0	52	52

WICHITA COUNTY

Roller, Ascot Co., 30 ..... dry
Beach, Bonchil Co., 12 25
Roller, Robinson and others 11 ..... dry
McCarty, Hammon and others 7-A 20
Miller, Hammon and others, 1 ..... dry
Watkins, Hawkins and others, 10-A 35
Mitchell, Hooser and others 5-A ..... dry
Mitchell, Hoorer and others 6-A ..... dry
Mitchell, Hooser and others 3-B ..... dry
Roberts, Maer and others 1 ..... dry
Allen & Kemp, O'Donohoe and others 4-B 125
Burnett, Perkins & Cullum 1 ..... dry
Allen & Kemp, Petroleum Producers Co., 7-B 200
Allen & Kemp, Petroleum Producers Co., 8-B 150
Allen & Kemp, Petroleum Producers Co., 1 ..... dry
Powell, Ridgeway and others 2 ..... dry
J. Burnett, Texhoma Oil & Ref. Co. 1 dry
Waggoner, Texhoma Oil & Ref. Co. 1 . dry
Pace, Underwood and others 4 65
Mitchell, White Brothers 1 120
Hooks, White Eagle Oil & Ref. Co. 3 .. dry
Durmot, Consolidated Oil Co.'s 1 ..... dry
Fossett, Electra Gulf Oil Co. 2 ..... dry
Pierce-Empire Gas & Fuel Co. 14 ..... dry
Peeler, Fidelity Oil Corp. 10 35

Peeler, D. D., Gardner and others 1 .. 45
Mitchell, Gulf Prod. Co. 1 60
Miller, Gulf Prod. Co. 1 ..... dry
Homaker, Magnolia Pet. Co. 68 50
Maer, Magnolia Pet. Co. 2-A 65
Mitchell, Pace and others 1-C 90
Burnett, Perking and others 15-A 55
Allen & Kemp, The Texas Co. 12..... 15
Burnett, Texhoma Oil & Ref. Co. 4-E . dry
Burnett, Texhoma Oil & Ref. Co. 1-N . dry
Kemp & Kempner, Tidal Oil Co. 1 ... dry
Roller, Ascot Co. 31 10
Bentley, Bonchil Co. 1 ..... dry
Jennings, Builington and others 2 10
Murray, Electra Gulf Oil Co. 4 135
Burnett, Fisher and others 1-B..... dry
Jennings, Gulf Prod. Co. 13 ..... dry
Burnett, Hammond and others 1 110
Mitchell, Hooser and others 4-A 20
Mitchell, Hooser 4-B 100
Ancell, Hudson and others 1 ..... dry
Allen & Kemp, Humble O. & R. Co. 4.. 125
Douglas, Magnolia Pet. Co. 13 ..... dry
Waggoner, Moran and others 3 5
Allen & Kemp, O'Donohoe and others 5-B 25
Allen & Kemp, O'Donohoe and others 6-B 85
Fisher, Paterson and others 3 10
Allen & Kemp, Petroleum Producers Co. 9-B ..... dry
Nance, Ryan Petroleum Co., 36 65
Allen & Kemp, Straus 6 15
Maier, The Texas Co. 15 140
McCarty, White Brothers 3 ..... dry
Roller, Robinson and others 12 ..... dry
Jennings, Apple and others 4-B 70
Roller, Cotton and others 1 10
Peeler, Fidelity Oil Corp. 1 20
Peeler, Fidelity Oil Corp. 1 5
Peeler, Gardner and others 2 75
Burnett Ranch, Perkins and others 1-A dry
Allen & Kemp, Producers Co., 10-B..... 65
Allen & Kemp, Petroleum Producers 11-B 120
Melton, Gulf Production 7-A 5
Mitchell, Gulf Production 2-A 40

Wells completed 69
Production 2310
Dry 30

WILBARGER COUNTY

Sigler-Wagoner, Atlantic Oil Producing Co. 1 25
Stephens, Humble Oil & Refining Co. 23 25
Stephens, Humble Oil & Refining Co. 27 50
Stephens, Humble Oil & Refining Co. 28.. 75
Stephens, McCamey's 15 45
Dille, Petroleum Producers, Co. 3..... 190
Waggoner, Texhoma & Burton 1 ..... dry
Waggoner, Atlantic Oil Producing Co. 2-B ..... dry
Stephens and others Humble Oil & Refining Co. 7 ..... dry
Bowers and others, Oklahoma & Tex Refining Co. 2 ..... dry
Waggoner, The Texas Co. 301 125
Dill, Bridwell and others 9 45
Stephens, Bridwell and others 10 60
Waggoner, (Sec. 27) Consolidated Oil Co. 1 ..... dry
Archer, Duke and others 1 ..... dry
Stephens, McCamey and others 9 110
Stephens, McCamey and others 21 40
Bond, Ray and others 5 130
Bond, Staley and others 3-A 50
Waggoner, Tidal Oil Co. 1 20
Zipperle, Continental Oil Co. 6..... 60
Sumner, Magnolia Petroleum Co. 49 ... 20
Waggoner (Sec. 35) Smith and others 1 20

Wells completed 23
Production 1090
Dry 6

ARCHER COUNTY

Wilson, Barkley and others 8 165
Parkley, Carter and others 1-B 25
Wilson, Consolidated Oil Co. 2..... dry
Wilson, Empire Gas & Fuel Co. 23-C ... 90
Cowan, Fletcher and others 1 ..... dry
Parrish, Franklin and others 13-A 20
Wisdom, Humble Oil & Refining Co. 1 dry
Wilson, Lomax and others 1 110
Wilson, McCarty Oil Co. 7-B 30
Wilson, McCarty Oil Co. 8-B 25
Wilson, Muse and others 1 ..... dry
Wilson, Nantz and others 1..... dry
Wilson, Waite Phillipe 12 400
Gore, Riner and others 1 225
Parrish, Simms Oil Co. 9 ..... dry
Jackson, Shappell Oil Co. 22 30
Taylor, Texhoma Oil & Refining Co. 4-A 40
Wilson, White Eagle Oil & Refining Co. 1 10
Wilson, Young and others 1 ..... dry
Farmer, Archer Oil Corp. 4-D 30
Cowan, Consolidated Oil Co. 1 ..... dry
Stampfil, County Line Oil Co. 7 80
Roach & Junker, Davis-Hart Co. 14 ... 20
Anderson, Empire Gas & Fuel Co. 2 40
Anderson, Empire Gas & Fuel Co. 3.... 165
Anderson, Humphreys and others 1 ... dry
Ickert, Maers and others 1 ..... dry
Rogers, Moore and others 4 ..... dry
Anderson, Murchison and others 1 80
Echols, Murchison and others 1-C..... dry
Anderson, Norday Co. 2-A 125
Anderson, Norday Oil Co. 4-A 40
Wolf, Waite Phillips 3 ..... dry
Richardson-Mayfield, Prairie Oil & Gas Co. 24 40
Hill, The Texas Co. 5 50
Coleman, Beaudoin and others 1..... dry
Wilson, British American Oil Co. 12.. 30
Wilson, British American Oil Co. 13.. 35
Wilson, Burns and others 4 110
Wilson, Burton and others 1 ..... dry
Plowman, Burton and others 1 ..... dry
Parkey, Carter and others 2-B ..... dry
Oil Investment Co., Clark and others 1 dry
Dowlin, Continental Oil Co. 1 ..... dry
Wilson, F. & H. Syndicate 1 190
Monohan, Gulf Production Co. 13 55
Rogers, Gulf Production Co.'s 6 40
Wear, Gulf Production Co. 1-A 50
Nichols, Gulf Production Co. 13 95
White, Phillips Petroleum Co. 78 85
White, Phillips Petroleum Co. 79 55
Jackson, Shappel Oil Co. 23 30
Wilson, Wichtex Oil Co. 6 ..... dry
Wilson, Woodburn Oil Corp. 20-A 30
Rogers, Fisher and others 7 70
Claypool, Childres Brothers 1 ..... dry
Wilson, Hooser 1 ..... dry
Rogers, Magnolia Petroleum Co. 5-B .. dry
Rogers, Magnolia Petroleum Co.'s 6-B.. 20
Lowe, Muse and others 19 25
Andrews, Prairie Oil & Gas Co. 1 ..... dry
Routan, Root and others 2 45
Anderson, The Texas Co. 1 ..... dry
Cowan, Simms Oil Co. 1 ..... dry
Kemp & Kempner, Ard and others 1 ... 5
Richardson, The Texas Co. 5 75
Wilson, Barkley and others 9 120
Wilson, Burns and others 5 40
Netherton, Consolidated Oil Co. 1 ... dry
Cowan, Humble Oil & Refining Co. 1.. dry
Oil Investment Co., Humble Oil & Refining Co. 4 40
Wilson, Kentucky Oil Corp. 1 ..... dry
Wilson, McCarty Oil Co. 9-B 20
Wilson, McCarty Oil Co. 10-B..... dry
Wilson, McCarty Oil Co. 11-B 25
Wilson, McCarthy Oil Co. 12-B ..... dry
Wilson, Pace and others 1 ..... dry
Wilson, Muse and others 1 80
Andrews, Ramming and others 1 ..... dry
Wilson, The Sun Co. 2-A 10
Taylor, Texhoma Oil & Refining Co. 5-A 85
Wilson, White Eagle Oil & Refining Co. 2 35
Cowan, Clark 3 10
Anderson, Empire Gas & Fuel Co. 4... 40
Stampfil, County Line Oil Co. 8 35
Wold, Gillespie and others 1-A ..... dry
Monohan, Gulf Production Co. 14 30
Oil Investment Co., Gulf Production Co. 15 30
Brom, Humble Oil & Refining Co. ..... dry
Stampfil, Magnolia Petroleum Co. 12 .. 1
Cowan, Major Petroleum Co. 8 20
Logan, Marland Oil Co. 1 ..... dry
Ickert, Moers and others 5 120
Echols, Murchison and others 2-C ... dry
Wood, Murchison and others 3 ..... dry
Anderson, Perkins and others 2 35
Anderson, Perkins and others 3 110
Wolf, Waite Phillipe 4 70
Richardson, Prairie Oil & Gas Co. 22.. dry
Richardson-Mayfield, Prairie Oil & Gas Co. 25 70
Farmer, The Sun Co. 12 ..... dry
Hill, The Texas Co. 6 100
Key, The Texas Co. 2 ..... dry
Rogers, The Texas Co., 8 30
Dalton, Texas Unity Oil Co. 1 ..... dry
Wilson, Wright and others 1 ..... dry
Fee, Young and others 1 ..... dry
Wilson, Barkley and others 10 60
Oil Investment Co., Bridwell and others 4 ..... dry
Wilson, Burns and others 6 135
Browning, Champion and others 4 ... dry
Plowman, Comac Oil Co. 1 ..... dry
Wilson, Kentucky Oil Corp. 1-N ..... dry
Wilson, Muse and others 1 65
Monohan, Gulf Production Co. 15 30
Wilson, Waite Phillips 1-B ..... dry
Waite Phillips 14 ..... dry
Wilson, Waite Phillips 15 55
Wilson, Waite Phillips 17 185
Wilson, Prairie Oil & Gas 14 130
Gore, Riner and others 2 20
Wilson, Riner and others 27-B 45
Parrish, Scott and others 8 55
Jackson, Shappell Oil Co. 24 30
Wilson, Texhoma Oil & Refining Co. 14-B ..... dry
Hamilton, Humble Oil & Refining Co. 5 ..... dry
Jackson, Shappell Oil Co. 25 125
Coffield, Magnolia Petroleum Co. 6 .. 50
Richardson, The Texas Co. 6 25
Routan, Root and others 3 35
Bishop, Mahlstedt-Mook Oil Co. 1..... dry
Pace, Weekly 1 ..... dry
Anderson, Weldon 1 ..... dry
Andrews, Wolf 1 ..... dry

Wells completed 134
Production 5075
Dry 55

YOUNG COUNTY

Craig, Dunn and others 1 ..... dry
Price, Hubbard Dry Co. 1 20
Mercer, Humble Oil & Refining Co. 5 550
Hutchings, Murchison and others 1 ... dry
Kilcrease, Murchison and others 1 ... dry
Campbell, Murchison and others 9-D... 550
Cheeves, Simms Oil Co. 4 75
Housler, Texas Unity Oil Co. 4 60
Dunnagan, Beavers and others 1..... 120
Boren, Clark and others 1 ..... dry
Dunagan, F. H. E. Oil Co. 5 45
Boren, Madden and others 3 ..... dry
Swaim, Gulf Production Co. 3 95
Kilcrease, Oxford Oil Co. 1 ..... dry
Kilcrease, Oxford Oil Co. 2..... dry
Kilcrease, Plains Production Co. 2 ... 150
Housler, Texas Unity Oil Co. 6 35
Cathey, Welch and others 2 65
McLaren, Christie Brothers 6 60
Kilcrease, Humble Oil & Refining Co. 1 95
Mercer, Humble Oil & Refining Co. 6... 45
Mercer, Humble Oil & Refining Co. 7.. 25
Leberman, Mahlstedt Mook Oil Co. 1.. dry
Jackson, Mooers and others 1-B 10
Morrison, Murchison and others 1 ..... dry
Campbell, Nantz 1-D 150
Barrett, Richardson Brothers 1 ..... dry
Cheeves, Simms Oil Co. 5 5
Carpenter, Simms Oil Co. 9-B 50

Wells completed 79
Production 2305
Dry 10

STEPHENS COUNTY

Pierce, Carter & Friedman 1 ..... dry
Langford, Carter & Thompson 5 150
Ramsey, Pardee and others 1 ..... dry
Gratz, Landreth Producing Co. 2 .....jnkd
Drake, Little and others 2 .....jukd
Bruce, Price and others 4 ..... dry
Binney, T. P. Coal & Oil Co. 55 50
Williams, Thompson and others 4 50
Allen, Phillips Petroleum Co. 1 ..... dry
Pritchard, Barkley and others 3 10
Fambrough, Carter and others 2 ..... dry
Scott, Sweeney and others 1 ..... dry
Pritchard, Abilene Cisco Oil Corp. 1... dry
Pritchard, Abilene Cisco Oil Corp. 2 .. dry
Pritchard, Barkley and others 4 160
Spicer, Corsellous Brothers 1 ..... dry
Pritchard, McLester Oil Co. 3 ..... dry
Moore, Phillips Petroleum Co. 2..... 5
Binney, T. P. Coal & Oil Co. 56 35
Bascom, Oliver Oil & Gas Co. 1..... dry
Knox, Republic Production Co. 6 25
Morton, Clayton and others 1 5
Lipe, Status Oil Corp. 1 ..... dry
Vaughon, States Oil Corp. 1 ..... dry
Vaughon, States Oil Corp. 1 ..... dry
Dooley, Wayland Oil Co. 1 ..... gas
Rosenquest, Williams and others 11 .. 15

Wells completed 27
Production 520
Dry 16
Gas 1

EASTLAND COUNTY

Allman, Magnolia Petroleum Co. 5 50
McMinn, Rosell Production Co. 4 30
Pettitt, Rosell Production Co. 3 250
Gooch, Keough and others 1 ..... dry
Basam, Dyar Brothers 1 15
Lee, Root and others 1 40
Foster, The Texas Co. 1 ..... dry
Casey, Panhandle Refg. Co., 1..... dry
Summervoll, States Oil Corp. 4 ..... dry
Jacobs, Lowe 3 ..... dry

Wells completed 10
Production 385
Dry 5

BROWN COUNTY

Newton, Gillman and others 14 200
Windham, Ward Oil Co. 1 ..... dry
Prather, Rhodes and others 9 10
Stone, Cranfill and others 1 ..... gas
Newton, Gillman and others 16 ..... dry
Teston, Gillman & McMurray 5 40
Arledge, J. K. Hughes Dev. Co. 1..... 20
Newton, Mendenhall and others 8 20
Baxter, Moore and others 2 60
Chambers, Moore and others 2 ..... dry
Gafford, Moore & Wilson 5 60
Newton, Mendenhall and others 9 15
Baxter, Moore and others 3 260

Wells completed 13
Production 685
Dry 3
Gas 1
Gas production 3,500,000

REAGAN COUNTY

University, Big Lake Oil Co. 38 1970
Group 1 University, Texon Oil & Land Co. 14 4575
Group 1 University, Texon Oil & Land Co. 16 2065
Group 1 University, Texon Oil & Land Co. 15 1615
Group 1 University, California Co. 1 .. dry

Wells completed 5
Production 10215
Dry 1

WILDCATS—HUTCHINSON COUNTY

Bivins, Amarillo Oil Co. 2 140
Carson County—
McBurnett, The Texas Co. 3 50
Jackson, Texhoma Oil & Refining Co. 1-B ..... dry
Krey, Vaughan and others 1 ..... dry
Wheeler County —
Porter, Midwest Exploration Co. 1 ... dry
Clay County—
Holloway, Lone Star Gas Co. 13 15
Montague County—
Maddox, Newblock Oil Co. 1 160
Oldham, Pure Oil Co. 1 ..... gas
Gist, The Texas Co. 4-A 40
Rowland, Texhoma Oil & Refining Co. 1-A ..... gas
Hinds, Nocona Gas Co. 2 75
Gist, The Texas Co. 3-A..... dry
Throckmorton County—
Polk County School Land, Gray and others 1 ..... dry
Travis County School Land, Flowers Brothers 1 ..... dry
Reynolds, Hope Petroleum Co. 3 75
Reynolds, Associated Petroleum Co. 4.. gas
Harrison, Humble Oil & Refining Co.. gas
Batchlor, Johnson and others 2..... dry
Rhodes, Jones and others 1 ..... dry
Cole, Staley and others 1 ..... dry
Shackelford County—
Fry, Phillips Petroleum Co. 3 15
Moberly, Albany Oil Co. 4 20
Parrish, Phillips Petroleum Co. 5 50
Reynolds, Albany Oil Co. 2 ..... dry
Elliott, Brannon and others 3 ..... dry
Reynolds, Hope Petroleum Co. 5 175
Reynolds, Hope Petroleum Co. 3 75
Potter County—
Bush, Amarillo Oil Co. 1 ..... gas
Erath County—
Mauldin, Gilett and others 1 ..... gas
Loney, Goodwin and others 3 ..... dry
Callahan County—
McDonaugh, Mook and others 1 90
Coleman County—
Morris, Canyon Oil & Gas Co. 1 ..... dry
Irion County
Suggs, Gladys Belle Oil Corp. 1 ..... dry
Baylor County—
Dorlick, Bridwell and others 1 ..... dry
Mills, Shaw and others 2 Mills ..... dry
Mills, Shaw and others 3 ..... dry
Mills, Shaw and others 5 ..... dry
Mills, Hooser and others 3 ..... dry
Mills, Shaw and others 4 15
Mills, Moer and others 3 30
Kuteman, Greenwood 1 ..... dry
Mitchell County—
Brown, Harris and others 2 ..... dry
Sterling County—
Ellwood, Northrup 1 ..... dry
Comanche County—
Lloyd, Chastain and others 1 ..... dry
Peek, Lost Valley Oil Co. 1 ..... dry
McCullough County—
Pumphrey, Northwest Co. 1 ..... dry
Tom Green County—
Broome, Denny and others 1 ..... dry

Wells completed 47
Production 1075
Dry 26
Gas 6
Gas production 35,500,000

WICHITA COUNTY

Rigs

Roller, Ascot Co. 33.
Ramming, Magnolia Petroleum Co. 9.

Drilling

Bentley, Bonchil Co. 2.
Everet, Hamilton and others 1.
Myers, Laning and others 1.
Reilly, Magnolia Petroleum Co. 115.
Reilly, Magnolia Petroleum Co. 116.
Reilly, Magnolia Petroleum Co. 117.
Roller, Reed and others 1.
Roller, Robinson and others 13.
Beach, Magnolia Petroleum Co. 1
Roller, Winters and others 1.
Ancell, Allen and others 1.
Jennings, Apple and others 7-A.
Jennings, Bullington and others 3
Burnett, Burnett Ranch Oil Co. 12.
Jennings, Dale Oil Corp. 12.
Allen and Kemp, Humble Oil & Refining 9-B.
Jenings, Jones and others 2.
Allen and Kemp, Maer and others 7.
Rio Bravo, Magnolia Petroleum Co. 49.
Rio Bravo, Magnolia Petroleum Co. 50.
Watkins, Magnolia Petroleum Co. 7.
Allen and Kemp, O'Donohoe and others 8-B.
Allen and Kemp, O'Donohoe and others 9-B.
Jennings, Panhandle Refining Oil 4.
Allen and Kemp, Petroleum Producers Co. 12.
Nance, Ryan Petroleum Co. 37.
Nance, Ryan Petroleum Co. 38.
Allen and Kemp, Allen and others 7.
Maer, The Texas Co. 16.
Waggoner, The Texas Co., 302.
Burnett, Texhoma, Oil & Refining Co. 2-L.
Burnett, Texhoma Oil & Refining Co. 2-M
Burnett, Texhoma and Cullum 9-A.
Allen and Kemp, Union Oil Co. 1.
Mitchell, White Brothers 2.
Rigs, 2; wells drilling, 35; total, 37.

WILBARGER COUNTY

Rigs

Castlebury, W. G. Burton 2.
Castlebury, Humble Oil & Refining Co. 3.
Waggoner, Humble Oil & Refining Co. 2-G

Wells Drilling

Waggoner, McLester Oil Co. 1.
Waggoner (Sec. 10) Maer and others 1.
Fee, Magnolia Petroleum Co. 69.
Piper, Magnolia Petroleum Co. 45.
Jiggs Waggoner, Magnolia Petroleum Co. 1
Waggoner, Milham Corp. 1-A.
Waggoner, Milham Corp. 1-B.
Waggoner, Murchison and others 1-C.
Waggoner, Murchison and others 1-D.
Wagogner, Prairie Oil & Gas Co. 1-B.
Waggoner, Pratt and others 1.
Sigler-Waggoner, Atlantic Oil Producing Co. 2.
Zipperle, Atlantic Oil Producing Co. 3.
Zipperle, Atlantic Oil Producing Co. 5.
Bond, Barkley and others 1.
Stephens, Barkley and others 3.
Dill, Bridwell and others 10.
Dill, Bridwell and others 11.
Stephens, Bridwell and others 11.
Waggoner (Sec. 2) Consolidated Oil Co. 1.
Waggoner (Sec. 4) Consolidated Oil Co. 1.
Zipperle, Continental Oil Co. 3.
Berry, Culberson and others 1.
Waggoner, Durham and others 1.
Waggoner, Durham and others 2.
Waggoner, Durham and others 3.
Waggoner (Sec. 47) Dyson and others 1.
Waggoner, Electra Texas Oil Co. 2.
Waggoner, Gray Oil Co. 1.
Waggoner, Herbert Oil Co. 1.
Castlebury, Humble Oil & Refining Co. 18-B
Stephens, Humble Oil & Refg. Co. 29.
Stephens, Humble Oil and Refining Co. 30.
Stephens, Humble Oil and Refining Co. 31.
Stephens, Humble Oil and Refining Co. 32.
Stephens, Humble Oil and Refining Co. 33.
Stephens, Humble Oil and Refining Co. 34.
Stephens, Humble Oil and Refining Co. 35.
Waggoner, Humble Oil and Refining Co. 2-D.
Waggoner, Humble Oil and Refining Co. 3-D.
Waggoner, Humble Oil and Refining Co. 1-E.
Waggoner, Humble Oil and Refining Co. 1-F.
Waggoner, Humble Oil and Refining Co. 2-G.
Waggoner, Humble Oil and Refining Co. 1-H.
Reed, Independent Oil & Gas Co. 1.
Waggoner, Kolp and others 8.
Waggoner, Kolp and others 9.
Waggoner, Landreth Production Co. 1-A
Waggoner, Landreth Production Co. 2-B
Waggoner, Landreth Production Co. 3-B
Waggoner, Landreth Production Co. 1-D
Waggoner, Landreth Production Co. 2-D
Waggoner, Landreth Production Co. 1-F
Waggoner, Landreth Production Co. 1-I.
Waggoner, Landreth Production Co. 1-M.
Waggoner, Lawson and others 9.
Waggoner, Lawson and others 12.
Waggoner, Lawson and others 13.
Fluhman, Lippard Oil Co. 1.
Stephens, McCamey and others 5.
Stephens, McCamey and others 10.
Stephens, McCamey and others 11.
Stephens, McCamey and others 13.
Stephens, McCamey and others 22.
Stephens, McCamey and others 23.
Bond, Ray and others 7.
Waggoner, Roeser and others 1.
Waggoner, Roxana Petroleum Co. 1-A.
Waggoner, Roxana Petroleum Co. 1-B.
Murphy, Shipley and others 1.
Waggoner (Sec. 24) Smith and others 1
Collins, Simms Oil Co. 1-A.
Zipperle, South Vernon Oil Co. 1.
Waggoner, States Oil Corp. 1.
Castlebury, The Texas Co. 1-C.
Owens, The Texas Co. 1.
Waggoner, The Texas Co. 303.
Thomas, Texhoma Oil & Refining Co. 2.
Zipperle, Travis Oil Co. 1-A.
Waggoner, Upham Co. 1 (Block 1.)
Bond, Waggoner and others 3.
Waggoner, Wells and others 1.
Waggoner, Thelma Wells 1.
Waggoner, Whilbert Oil Co. 1-B.
Waggoner, Whilbert Oil Co. 1-C.
Waggoner, Whilbert Oil Co. 1-D.
Rigs, 3; wells drilling, 86; total, 89.

ARCHER COUNTY

Rigs

Morwits, Hart Oil Corp. 1.
Wilson, McCarty Oil Co. 2.
Wilson, Waite Phillips 20.
Wilson, Waite Phillips 21.
Wilson, Waite Phillips 22.
Perkins, Smith and others 1.
Rudd, Lincoln and others 1.
Wallace, Skinner and others 1.
Neal, Gwynn and others 1.
Griffin, Magnolia Petroleum Co. 7.
Richardson, Prairie Oil & Gas Co. 23-B.
Richardson-Mayfield, Prairie Oil & Gas Co. 28.
Hauser, The Texas Co. 1.
Rogers, The Texas Co. 10.

Wells Drilling

Jackson, Shappell Oil Co. 26.
Jackson, Shappell Oil Co. 27.
Wilson, Barkley and others 11.
Wilson, Barkley and others 12.
Kirkland, Bridwell and others 1.
Wilson, Burns and others 7.
Wilson, Burns and others 8.
Wilson, Burton and others 1-B.
Dycus, Consolidated Oil Co. 1.
Wilmot, Dale and others 14.
Myers, Fergusen and others 1-A.
Todd, Garver and others 1.
Wilson, Hill and others 1-A.

Lyles, Jeffers and others 1.
Jackson, Jenson Oil Co. 1.
Wilson, Lomax and others 4.
Wilson, Lomax and others 5.
Wilson, McCarty Oil Co. 2.
Coleman, McElreath and others 1.
Wilson, Muse and others 2.
Wilson, Nantz and others 2.
Parrish, Oil Investment Co. 2.
Wilson, Waite Phillips 2-B.
Wilson, Waite Phillips 18.
Wilson, Waite Phillips 19.
Wilson, Waite Phillips 23.
Wilson, Waite Phillips 24.
Wilson, Waite Phillips 29.
White, Phillips Petroleum Co. 83.
White, Phillips Petroleum Co. 84
Nichols, Ray and others 12.
Wilson, Riner and others 28-B.
Perkins, Smith and others 1.
Dale, Texas Drilling Co. 1.
Gose, Texhoma Oil & Refining Co. 46.
Wilson, Wilson Drilling Co. 1-A.
Wilson, Woodburn Oil Corp. 21-A.
Brom, Barkley and others 1.
Prideaux, Dolman and others 1.
Neal, Gywnn and others 1.
Darelik, Jones and others 1.
Ickert, Marland Oil Co. 1.
Richardson, Marland Oil Co. 3.
Ickert, Moores et al 9.
Rogers, Panhandle Refining Co. 4.
Anderson, Prairie Oil & Gas Co. 1.
Richardson, Prairie Oil & Gas Co. 1-D.
Richardson, Prairie Oil & Gas Co. 2-D.
Richardson-Mayfield, Prairie Oil & Gas Co. 28.
Prideaux, Slint et al 1.
Hill, Texas Co. 7.
Hill, Texas Co. 8.
Richardson, Texas Co. 8.
Rogers, Texas Co. 10.
Richardson, Tidal Oil Co. 1.
Lester, Harris et al 1.
Bell, Merrick et al 1.
Anderson, Perkins et al 4.
Wolf, Waite Phillips 5.
Wolf, Waite Phillips 6.
Wolf, Waite Phillips 7.
Wolf, Waite Phillips 8.
Wilhelm, Reilly et al 1.
Justice, Smith et al 1.
Farmer, Sun Co. 13.
Rigs, 14; wells drilling, 65; total, 79.

YOUNG COUNTY

Rigs

Dyer, Allen et al 1.
Kilcrease, Plains Production Co. 7.

Wells Drilling

Leberman, British American Oil Co. 1.
McLaren, Christie Brothers 7.
Laquey, Hinson et al 1.
Kilcrease, Humble Oil & Refining Co. 3.
Robbins, Humble Oil & Refining Co. 1.
Doyle, Junker et al 1.
Kemp, Lesh et al 10.
Hamilton, Madden et al 1.
Donnell, McQuain et al 1.
McKeichan, Mission Oil Co. 1.
Ickert, Moores et al 6.
Campbell, Murchison et al 16-D.
Campbell, Murchison et al 17-D
Campbell, Murchison et al 18-D.
Campbell, Murchison et al 2-E.
Parrish, Navarro Oil Co. 1.
Kemp, Nelson et al 1.
Kilcreare, Petroleum Producers Co. 3.
Kilcrease, Plains Production Co. 7.
Hunt, Ramming et al 1.
Dunagan, Roamer Oil Co. 2.
Cathey, Roeser et al 1.
Kunkel, Roeser et al 1.
Carpenter, Simma Oil Co. 5-A.
Fee, Stovall et al 3.
Fee, Stovall et al 4.
Kunkel, Texas Co. 1.
Wilson, Texas Co. 1.
Hausler, Texas Unity Oil Co. 8.
Dunagan, Weaver et al 4.
Rigs, 2; wells drilling, 30; total, 32.

STEPHENS COUNTY

Rigs

Cunningham, Collins et al 1.
Pritchard, Abilene Cisco Oil Corp. 4.
Litton, Clark et al 1.
Long, Hughes et al 1.
Powell, Kingston et al 1.
Kline, McLester Oil Co. 1.
Hawkins, States Oil Corp. 1.
Adams, Texas Pacific Coal & Oil Co. 3.
Dean, Wayland Oil Syndicate 1.

Wells Drilling

Keel, Hofmeier et al 1.
Sweeney, Humble Oil & Refining Co. 2-A.
Hill, Mid-Kansas Oil & Gas Co. 13.
Hill, Mid-Kansas Oil & Gas Co. 17.
Hill, Mid-Kansas Oil & Gas Co. 6.
Cunningham, Mid-Tex Oil Co. 2.
Hamil, Raney et al 1.
Cobb, Swensondale Oil Co. 8.
Echols, Swensondale Oil Co. 1.
Donnell, Texas Pacific Coal & Oil Co. 1.
Kirtley, Texas Pacific Coal & Oil Co. 4.
Hames, Barkley et al 1.
Pierce, Carter et al 2.
Langford, Carter and Thompson 6.
Polan, Carter and Thompson 1.
Satterfield, Crosby Oil & Gas Co. 1.
Hagaman, Hagaman Refining Co. 1.
Grimes, Kleinfelder et al 3.
Elliott, Landreth Production Co. 1.
Gratz, Landreth Production Co. 3.
Langford, McLester Oil Co. 1.
Walker, Magnolia Petroleum Co. 6.
McCleskey, Norman et al 2.
Pace, Phillips Petroleum Co. 1.
Tarrant, Phillips Petroleum Co. 1.
Ware, Prairie Oil & Gas Co. 4.
Whalen, Scott et al 1.
Cooper, States Oil Corp. 1.
Adams, Texas Pacific Coal & Oil Co. 8.
Binney, Texas Pacific Coal & Oil Co. 67.
Hand, Texas Pacific Coal and Oil Co. 2.
Veale, Texas Pacific Coal & Oil Co. 8.
Veale, Texas Pacific Coal & Oil Co. 9.
Parks, Texas Co. 37-A.
Vick, Texas Co. 3.
Mayhall, Tidal Oil Co. 1.
Rigs, 9; wells drilling, 36; total, 45.

EASTLAND COUNTY

Rigs

Brasher, Corzelius et al 2.
Folts, Magnolia Petroleum Co. 1.
Williams, Mid-Kansas Oil & Gas Co. 1.
Blackwell, Parsons et al 1.
McClarney, Teatsworth et al 1-A.
Luse, Root et al 1.

Wells Drilling

Jones, Davisson et al 1.
Woods, Gallagher et al 1.
Gilbert, Halmack Oil Co. 1.
Thompson, Halmack Oil Co. 6.
Allen, Lightfoot et al 2.
Allman, Magnolia Petroleum Co. 6.
Birhop, Magnolia Petroleum Co. 1.
Harrell, Prairie Oil & Gas Co. 4.
McMinn, Robert Oil Corp. 5.
McMinn, Robert Oil Corp. 6.
Pettis, Robert Oil Corp. 4.
Henderson, States Oil Corp. 4.
Hitson, Hoffer Oil Corp. 1.
Raney, Holliday et al 1.
Wilkerson, Landreth Petroleum Co. 1.
Rust, Pitzer et al 1.
Leveridge, Reeves et al 1.
Kurklin, Root et al 1.
Pelfrey, Root et al 1.
Hise, States Oil Corp. 5.
Chastain, Texas Co. 1.
Rushing, Texas Development Co. 2.
Rigs, 6; wells drilling, 22; total, 28.

BROWN COUNTY

Rigs

Newton, Gillman 11.
Graham, Infield Petroleum Co.'s 1.
Clark, McCamey 1.
Newton, Mendenhall 10.
Gafford, Moore 8.

Wells Drilling

Newton, Adams 1.
Williams, Anderson 1.
Newton, Gillman 15.
Henry, Gillman & McMurray 1.
Teston, Gillman & McMurray 7.
Hubbard, Halmack Oil Co. 1.
Helms, Howell 1.
Ariedge, Hughes 2.
Moore, Hughes 1.
Madison, Mahlstedt Oil Co. 1.
Wright, Mook 1.
Newton, Mook 3.
Clark, McLester Oil Co. 1.
Baxter, Moore 4.
Kilgore, Moore 1.
Gafford, Moore & Wilson 6.
Gafford, Moore & Wilson 7.
Gilliam, Olympia Oil & Refining Co. 3.
Armstrong, Prairie Oil & Gas Co. 1.
Prather, Schaffner 1.
Windham, Slick 1.
Rigs, 5; wells drilling, 21; total, 26.

REAGAN COUNTY

Rigs

University, Tannehill 1.
Group 1 University, Texon Oil & Land Co. 25.
Group 1 University, Texon Oil & Land Co. 26.
Group 1 University, Texon Oil & Land Co. 28.

Wells Drilling

University, Big Lake Oil Co. 17.
University, Big Lake Oil Co. 20.
University, Big Lake Oil Co. 30.
University, Big Lake Oil Co. 31.
University, Big Lake Oil Co. 32.
University, Big Lake Oil Co. 34.
University, Big Lake Oil Co. 36.
University, Big Lake Oil Co. 37.
University, Big Lake Oil Co. 39.
University, Big Lake Oil Co. 40.
University, Big Lake Oil Co. 41.
University, Big Lake Oil Co. 42.
University, Big Lake Oil Co. 43.
University, Big Lake Oil Co. 44.
University, Big Lake Oil Co. 45.
University, Big Lake Oil Co. 46.
University, Cogdell 1.
Sugg, Dunning 1.
Wilson, Morland Oil Co. 1.
University, Simon 1.
Group 1 University, Texon Oil & Land Co. 12.
Group 1 University, Texon Oil & Land Co. 22.
Group 1 University, Texon Oil & Land Co. 23.
Group 1 University, Texon Oil & Land Co. 24.
Group 1 University, Texon Oil & Land Co. 27.
Group 1 University, Texon Oil & Land Co. 29.
Group 2 University, Texon Oil & Land Co. 4.
Rigs, 4; wells drilling, 27; total, 31.

WILDCATS

BAYLOR COUNTY

Wells Drilling

Portwood, Humphreys 1.
Upsher County, McDonnald 1.

CLAY COUNTY

Wells Drilling

Holloway, Lone Star Gas Co. 14.
Holloway, Navarro Oil Co. 1.
Alcorn, O'Neil 1.
Green, Cumley 1.
Scaling, Atlantic City Producing Co. 1.
Edrington, Howell 1.
Soner, Knox Finley Developing Co. 5.
Waggoner, Lone Star Gas Co. 26.

MONTAGUE COUNTY

Rigs

Jones, Pure Oil Co. 1.
Maddox, Smith 1.
Steadman, Universal Oil Co. 1.

Wells Drilling

Jones, Texas Co. 1.
Maddox, Texhoma Oil & Refining Co. 1.
Lemon, Texhoma Oil & Refining Co. 1-A.

THROCKMORTON COUNTY

Wells Drilling

Cummings, Associated Petroleum Co. 1.
Reynolds, Associated Petroleum Co. 3.
Reynolds, Associated Petroleum Co. 5.
Parrott, Hoffer Oil Corp. 1.
Harrison, Humble Oil & Refining Co. 1.
Stubblefield, Humble Oil & Refining Co. 2.
Richards, Larkin 1.
Davis, Magnolia Petroleum Co. 1.
Graham, Red Bank Oil Co. 1.
Stubblefield, Reiter Foster Oil Co. 1.
Burkhaulter, Smith Oil Co. 1.

SHACKELFORD COUNTY

Rigs

Newell, Mid-Kansas Oil & Gas Co. 1.
Parrish, Phillips Petroleum Co. 8.

Wells Drilling

Elliott, Brannon 4.
Parrish, Conley 1.
Colbert, Domestic Oil Co. 1.
Newell, Hope Petroleum Co. 1.
Poindexter, Hope Petroleum Co. 1.
Elliott, Humble Oil & Refining Co. 2.
McLemore, Humble Oil & Refining Co. 2.
Black Brothers, Lake 1.
Black Brothers, Loggie 3.
Clausell, McKamra 1.
Fry, Phillips Petroleum Co. 1.
Parrish, Phillips Petroleum Co. 7.
Colbert, Richardson Brothers 1.
Elliott, Riley 1.
Sexton, Rogers 1.
Myer, Tannehill 5.

PALO PINTO COUNTY

Rigs

Cardwell, Hart 1.
Cardwell, Hart 2.
Roswessen, Pendar Production Co. 2.

Wells Drilling

Dalton, Jack Dalton Oil Co. 6.
Chestnut, Upham Gas Co. 2.
Strawn Coal Co., Burton 4.
Hart, Hart Oil Corp. 10.
Slemmons, Moore 1.
Slemmons, Pender Production Co. 3.
Stuart, T. P. Coal & Oil Co. 148.
Belding, Upham Gas Co. 4.

CALLAHAN COUNTY

Rigs

Black, Brannon 1.
Cathey, Dutton 7.
Block 10, Neeb 1.
Gilliland, Quaker Oil Co. 1.
Block 89, Weller Brothers.

Wells Drilling

Coates, Bowden 1.
Block 57, Cranfill 1.
Block 25, Harris 1.
McDermott, Mogul Oil Corp. 1.
Block 7, Moore 1.
Haley, Slick 1.
Finley, Urbon 1.
Block 31, Wakefield 1.
Block 6, Warren 1.

HUTCHINSON COUNTY

Rigs

Whittenbury, Gibson 1.
Smith, Western Enterprise Oil & Gas Co. 2.

Wells Drilling

Weatherly, American Refining Co. 1.
Smith, Dixon Creek Oil Co. 2.
Perkins, Panhandle Refining Co. 2.
Perkins, Panhandle Refining Co. 3.
Kingsland, Phillips 1.
Kingsland, Phillips 2.
Smith, Raxana Petroleum 1.
Johnson, Tex-O Oil Co. 1.
Kingland, Twin Six 2.

CARSON COUNTY

Rigs

Burnett, Crosbie Oil Co. 3.
Burnett, Hicks 1.

Wells Drilling

Burnett, American Refining Co. 1-C.
Burnett, American Refining Co. 1-D.
Burnett, American Refining Co. 1-E.
Burnett, Culbertson Brothers 1.
Burnett, Magnolia Petroleum Co. 1.
Burnett, Morland Oil Co. 2.
Burnett, Morland Oil Co. 3.
Burnett, Morland Oil Co. 4.
Burnett, Olson Brothers 1.
Burnett, Slik 4.
Burnett, Texas Co. 5.
Burnett, Texas Co. 6.

GRAY COUNTY

Rigs

Byrum, Osborne 1.

Wells Drilling

Beavers, Anderson 1.
Bowerts, Danciger Oil & Refining Co. 1.
Combs & Wanley, H. F. Wilcox 1.

WHEELER COUNTY

Rigs

Company, Midwest Exploration Co. 1.
Williams & Laycock, Midwest Exploration Co. 1-A.

Wells Drilling

Williams & Laycock, Globe Oil Co. 1.
Williams & Laycock, Midway Oil Co. 1.
Phillips, Rook 1.
Westmorland, Shedden 1.
O'Gorman, Vaughon 1.

COLLINGSWORTH COUNTY

Wells Drilling

Hughes, Continental Oil Co. 1.

FOARD COUNTY

Rigs

Burress, Central Oil Co. 1.
Easley, Navarro Oil Co. 1.

Wells Drilling

Bell, Murchison 1.
McCoy, Texas Co. 1.

COOKE COUNTY

Rigs

Hyman, Lamier 1.
Boaz, Masters 1.
Williams, Pettit 1.

Wells Drilling

Pierce, Porter 1.
Ludeman, Sun Co. 1.

DENTON COUNTY

Wells Drilling

Fortenberry, Gainesville Syndicate 1

Wise County—

Wells Drilling

Castleberry, Transcontinental Oil Co. 1.

Rigs

Jack County—

Preston, Buttram Petroleum Co. 1.

Wells Drilling

Campbell, Humphreys Corp. 1.

Wells Drilling

Haskell County—

Proctor, Adams 1.
Malone, Herbert Oil Co. 1.
Ballard, Kourie 2.
Sicker, Meyers 1.
Colbert, Wolf 1.

Wells Drilling

Stonewall County—

Thomas, Nance 1.

Wells Drilling

Garza County—

Connell, Morland Oil Co. 1.

Wells Drilling

Gaines County—

Lindsey, Phelps et al 1.

Wells Drilling

Scurry County—

Towle, Morrison et al 1.
Wood, California Co. 1.

Wells Drilling

Parker County—

Davis, Monroe et al 1.
Evans, Swensondale Oil Co. 1.

Rigs

Erath County—

Laney, Goodwin et al 4.
Burch, Moore et al 1.

Wells Drilling

Mitchell County—

Keynard, Eastland Oil Co. 4.
Scott, Henshaw et al 1.
Keith, Snyder et al 1.
Morrison, California Co. 14.

Wells Drilling

Howard County—

Scott, Deep Rock Oil Co. 1.
O'Daniel, Marland Oil Co. 1.

Wells Drilling

Martin County—

Slaughter, Humble Oil & Refining Co. 1.

Rigs

Culberson County—

Guard, Pure Oil Co. 1.

Wells Drilling

Fee, Gresham Brothers 1.
Gresham, California Co. 1.

Rigs

Loving County—

Kyle, Rio Grande Oil & Refining Co. 1.

Wells Drilling

Chapman, P. V. Petroleum Co. 1.

Wells Drilling

Midland County—

Hill, Rook et al 1.

Wells Drilling

Sterling County—

Douthit, Buell et al 1.
Reynolds, Harty et al 1.
Hull, Wrightsman Petroleum Co. 1.
Foster, Wrightsman Petroleum Co. 1.
Mills, White Eagle Oil & Refining Co. 1.

Wells Drilling

Coleman County—

Harris Canyon Oil & Gas Co. 1.
Young, Morrison et al 1.

Wells Drilling

Comanche County—

Forrest, Wilson et al 1.

Wells Drilling

Irion County—

Case, Virginia Texas Petroleum Co. 1.

Wells Drilling

Upton County—

Baker, McCamey et al 1.

Rigs

Crane County—

Cowden, Penn-Tex Development Co. 1.

Wells Drilling

Pecos County—

Cowden, Cardons Oil & Potash Co. 1.
Shebino, Dixie Oil Co. 1.

Wells Drilling

Crockett County—

Wells Drilling

University, Cook et al 1.
Massey, Crockett Drilling Syndicate 1.
Powell, Humble Oil & Refining Co. 2.
Harris, Humble Oil & Refining Co. 1.
University, Shaffer et al 1.
Rigs, 32; wells drilling, 138; total, 170.

EAST CENTRAL TEXAS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Navarro	31	718	10	0	7	30	37
Limestone-Freestone	7	0	7	0	1	8	9
Miscellaneous	0	0	0	0	7	26	33
Total Aug.	38	718	17	0	15	64	79
Total July	32	1,981	5	1	10	69	79
Difference	6	1,263	12	1	5	5	0

NAVARRO COUNTY

Wells Completed

McKie, Pure Oil 67 ..... dry
Davis, Humble O. & R. 18 26
Davis, Humble O. & R. 19 28
Fleming, Humble O. & R. 11-B 21
Fleming, Humble O. & R. 12-B 18
Ramsey, Humble O. & R. 17-A 10
Fleming, Humble O. & R. 13-B ..... dry
Ramsey, Humble O. & R. 20-A 8
Ramsey, Humble O. & R. 21-A 20
Ramsey, Humble O. & R. 28-B ..... abd
Ramsey, Humble O. & R. 29-B ..... dry
Bailey, DeArmond Bros. 2 23
Bailey, DeArmond Bros. 3 20
Smith, Gulf Prod. Co. 2 23
Smith, Gulf Prod. Co. 3 35
W. Smith, Humble O. & R. 10 ..... dry
G. H. Kent, Humble O. & R. 5-A ..... dry
G. C. Kent, Humble O. & R. 22 12
G. C. Kent, Humble O. & R. 23 11
Gentry, Skelly Oil 3 12
Thompson, Tidal Oil 7 12
Moore & Banks, Moore et al 1 ..... dry
Right-of-Way, T. & B. V. R. R. 1-A ... 12
Right-of-Way, T. & B. V. R. R. 2 12
Eliot, Simma Oil 1 ..... dry
Mrs. Talley, Atlantic O. P. Co. 1 110
Hillburn, Gulf Prod. Co. 3 175
Hillburn, Sun Oil Co. 3-A 65
Hillburn, Sun Oil Co. 4-A 65
Quimby, Moore Bros. 1 ..... dry
Phipps, Oxford Oil 2 ..... dry

Wells completed 31
Production 718
Dry 10

LIMESTONE-FREESTONE COUNTIES

Crouch, Pure Oil 2 ..... dry
Right-of-Way, Rio Bravo Oil 14 ..... dry
Stubbs, Humble O. & R. A-6 ..... dry
Wright, Pure Oil 1 ..... dry
Gill, Huddleston et al 1 ..... dry
Kennedy, Magnolia Pet. 1 ..... dry
Jones, E. L. Smith Oil 1 ..... dry

Wells completed 7
Dry 7
(Shut down wells indicated by an *)

NAVARRO COUNTY

Rigs

Barry, Elliott & Nicolle 1.
Derden, Garland Kent 1.
Harvard, McNeeley & La Suer 1.
Right of Way, T. & B. V. Ry. 3-A.
Reese, Holt et al 1.
Hillburn, Sun Oil 3.
Longbotham, Snowden & McSweeney 13.

Drilling and Shut Down

Vinson, Penn et al 1*.
Greer, G. Johnson et al 1.
Westbrook, Elliott & Nicolle 1*.
Cerf, Barclay & Meadows 1-A.
Bush, Gulf Prod. Co. 8.
Davis, Humble O. & R. 20, 21.
Pugh, Humble O. & R. 10.
Cerf, Barclay & Meadows 2-A, 3-A.
Cerf, Farish, Watts & Collins 4-A.
Fleming, The Texas Co. 14.
G. H. Kent, Humble O. & R. 4-A.
G. C. Kent, Humble O. & R. 21.
Thompson, Tidal Oil Co. 8.
Moore, E. L. Smith et al 1.
Goldman, Miller & Irwin 1*.
Price, G. Kent 1.
McDaniels, Garland Kent 1.
Sneed, Kerr & Gillette 1*.
Talley, Atlantic O. P. Co. 2.
Hillburn, Barclay & Meadows 3.
Hillburn, Barclay & Meadows 4*.
Stubbs, Graves et al 2.
Hillburn, Gulf Prod. Co. 4.
Swink, Sun Oil Co. 1, 2-B.
Laird, King State Oil 1*.
Bounds, E. B. Streetman et al 1.
Morrow, Atlantic O. P. 2.
Rigs, 7; wells drilling, 30; total, 37.

LIMESTONE-FREESTONE

Rigs

Bounds, Patterson Lake Oil 1.

Wells Drilling

Pickens, Kechi Petr. 1*.
Richardson, Wells et al 1*.
Sanders, Yoder et al 1.
Oliver, Lewis & Hunter 1.
Stockton, Pure Oil 1.

Bates, Kerr & Gillette 1.
Deen, Swearingen et al 1.
Curry, Paddy Kosse 1.
Rigs, 1; wells drilling, 8; total, 9.

MISCELLANEOUS COUNTIES

Rigs

Anderson County—
Turner, Hughes et al 1.
Cass County—
Speers, Bankers Trust 1.
Caster, Gibbs Petr. 1.
Falls County—
Bargsiner, Harrison et al 1.
Woodruff, Richardson Bros. & Mook Texas Oil Co. 1.
Henderson County—
Bounds, F. Haynes 3.
VanZandt County—
Green, Marland Oil Co. 1.

Wells Drillingg

Anderson County—
Parker, F. E. Williams 2*.
Brooks & Auld, Rosser et al 1*.
Monning Plant, Palestine Oil Co. 1*.
Bowie County—
Parkey, Dalby Springs Oil 1*.
Rochelle, DeLaney O. & G. 1*.
Cass County—
Evans, Caldwell et al 1*.
Cherokee County—
Clapp, Collington Drg. Co. 1*.
Falls County—
Thompson, Harrison et al 1*.
Peacock, High Banks Oil 1*.
Hopkins County—
Brooks, Kelsey et al 1.
Hunt County—
Barnett, Tullall & Kelsey 1.
Milam County—
Woodall, Butler Boys 1.
Stidham, Simms Oil 1.
Foster, J. K. Hughes Dev. Co. 1.
Isaacs, John E. Lee 1.
L. Kime, Magnolia Petr. 1.
Rains County—
Peoples, Cree & Coulter 1.
Red River County—
Dinviddie, Brewer Hines 1*.
Simmons, Clarksville Texas Co. 1*.
Arnold, Tarbell & Gibson 1*.
Antone, Johnson Pet. 1*.
Workham, O Bannon Bros. 1*.
Garland, Higgins Oil 1*.
Titus County—
Antone, Magnolia Pet. Co. 1.
VanZandt County—
Jones, Mexia Drg. Co. 1*.
Dunbar, Terrell Oil 1*.
Rigs, 7; wells drilling, 26; total, 33.

SOUTHWEST TEXAS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Luling	2	0	2	3	9	12	
Laredo Dis.	15	490	3	4	1	8	9
Somerset	2	10	1	0	0	5	5
Calliham	4	25	0	1	0	4	4
Rockdale-Minerva	2	70	0	0	3	5	8
Jim Hogg County	6	710	1	0	5	8	13
Lockhart	58	16,940	3	0	15	63	78
Miscel.	12	0	12	0	21	53	74
Total Aug.	101	18,245	25	7	48	155	203
Ttl. July	110	12,388	23	4	36	112	148
Difference	9	5,857	2	3	12	43	55

WELLS COMPLETED

LULING

River Bed, Detert & Oldmstead 2 ... gas
Tabor, United North & South Oil 26 .. gas

Wells completed 2
Gas 2

LAREDO

Garza, O'Hern & Putman 1 ..... gas
Gates, Chenault Oil 4 ..... abd
Garcia, Crown Central Oil 23 25
Aviator, Rydal Oil 1 ..... gas
Las Albertas, Crown Central Oil 1.... gas
Wolcott, Magnolia Pet. 17 100
Aviator, J. K. Hughes Dev. 11 100
Garcia, Crown Central 23 20
Ochoa, Magnolia Pet. 17 20
La Graza, Snodgrass et al 1 ..... abd
Boyd, Segundas Oil 1 ..... abd
Sur. 336, MOP Oil 1 ..... gas
Aviator, Rydal Oil 13 80
Aviator, Rydal Oil 14 100
Garcia, Crown Central 9 50

Wells completed 15
Production 490
Gas 4
Abandoned 3

CALLIHAM

Lowe, D. C. & M. C. Oil 7 5
Cox, Old Ocean Oil 8 10
Odem, Walton et al 1 ..... gas
Lowe, D. C. & M. C. Oil 6 10

Wells completed 4
Production 25
Gas 1

ROCKDALE-MINERVA

Coulter, Clear Lake Oil 3 20
——, Bartlett Prod. 4 50

Wells completed 2
Production 70

JIMM HOG COUNTY

Vela, Rydal-Texas 1 250
Martinez, Kisselman & Stalbans 12 ... 200
Lang, O. W. Killiam, 2 100
Martinez, O. W. Killiam 11 100
——, Alexander et al 1 60
Martinez, O. W. Killiam, 7 ..... abd

Wells completed 6
Production 710
Abandoned 1

LOCKHART

Beaty, The Texas Co. 12 300
Beaty, Magnolia Pet. 5 200
Beaty, Magnolia Pet. 6 200
Cardwell, Witherspoon Oil 7 500
Cardwell, Gulf Prod. 10 1200
Cardwell, Gulf Prod. 8 700
Brewer, P. & H. Drlg. 1 100
Beaty, Magnolia Pet. 7 ..... dry
Beaty, The Texas Co. 10 ..... dry
Brewer, Gulf Prod. 12 2000
Cardwell, Gulf Prod. 15 300
Cardwell, Gulf Prod. 16 300
Beaty, Magnolia Pet. 8 50
Beaty, Magnolia Pet. 9 50
Dannelly, Eagle Drlg. 2 200
Cardwell, Humble Oil & Refg. 7 200
Cardwell, Humble Oil & Refg. 3 4000
Withers, Magnolia Pet. 1 1700
Cardwell, Magnolia Pet. 1 1500
Beaty, Gulf Prod. 16 ..... abd
Beaty, C. M. Cope 5 ..... abd
Riddle, Gulf Prod. 2 150
Beaty, Gulf Prod. 17 300
Cardwell, Gulf Prod. 14 500
Cardwell, Eagle Drlg. 3 500
Cardwell, C. M. Cope 3 100
Beaty, Brownlee Co. 3 300
Beaty, Brownlee Co. 4 250
Beaty, Brownlee Co. 5 250
Beaty, Randolph 2 10
Beaty, Magnolia Pet. 2 10
Beaty, Randolph 3 10
Beaty, The Texas Co. 6, 7 ..... dry
Beaty, The Texas Co. 13 40
Beaty, The Texas Co. 9 75
Eppwright, Calsado et al 2 75
Gomillion, Grayburg Oil 7, 8 ..... dry
Beaty, Gulf Prod. 13 45
Beaty, Gulf Prod. 14 30
Beaty, Gulf Prod. 15 40
Brewer 54 acres, Gulf Prod. 8 20
Brewer 54 acres, Gulf Prod. 9 40
Brewer 54 acres, Gulf Prod. 10 50
Brewer, 90 acres, Gulf Prod. 14 90
Brewer 90 acres, Gulf Prod. 15 300
Brewer 90 acres, Gulf Prod. 16 100
Brewer 90 acres, Gulf Prod. 17 25
Brewer, Gulf Prod. 18 40
Palmer, Gulf Prod. 1 ..... dry
Cardwell, Lang et al 4 50
Cardwell, Lang et al 3 50
Cardwell, Lang et al 5 ..... dry
Brewer, Bennett Prod. 9 50
Cardwell, Quaker Oil 3 25
Palmer, Quaker Oil 4 30
Cardwell, Harper et al 1 15

Wells completed 58
Production 16,940
Dry 8

MISCELLANEOUS

Bexar County—
Cassin, Humble O. & R. 1 ..... abd
Bastrop County—
Hicks, Foster & Reiter 1 ..... abd
Glover, Patton et al 1 ..... abd
Smith, Simms Oil 1 ..... abd
Calvert, Plateau Oil 1 ..... abd
Caldwell County—
Chissen, Witherspoon Oil 1 ..... abd
Lemon, Witherspoon Oil 1 ..... abd
Stecky, Sun Co 1 ..... abd
Payne & Bland 1 ..... abd
Guadalupe County—
Vetter, Scrivner et al 1 ..... abd
Karnes County—
Butler, E. B. Reynolds 1 ..... dry
Milam County—
Kime, Magnolia Pet. 1 .....Water

Wells completed 12
Dry 12

LULING

Rigs

Clair, United North & South Oil 2.
Brown, United North & South Oil 1.
Lee Byrd, 12, United North & South 12.

Wells Drilling

Kelly, United North & South Oil 1.
Tiller, United North & South Oil 3, 6.
Stair, United North & South 1.
McKinney, United North & South Oil 3.
Merriweather, P. & W. Drlg. 11.
Schubert, Magnolia Pet. 7, 13, 14.
Rigs, 3; wells drilling, 9; total, 12.

LAREDO DISTRICTS

Rigs

Wheatley, Crown Central Oil 26.

Wells Drilling

Puig, Magnolia Pet. 12.
Westphal, Associated Oil 1.
Lopez, Associated Oil 1.
Quigg, Crown Central Oil 6.
Garcia, Crown Central Oil 9.
Webster, Morgan et al 1.
Garza, Muckelroy et al 1.
Pratt, Baltic Oil 1.
Rigs, 1; wells drilling, 8; total, 9.

SOMERSET

Wells Drilling

Langley, Witherspoon Oil 7.
Klemcke, Witherspoon Oil 1.
Langley, Helvetia Oil 6.
Smith, Helvetia Oil 13, 15.
Weimer, Helvetia Oil, 11.
Rigs, 0; wells drilling, 5; total, 5.

CALLIHAM

Wells Drilling

Lowe, D. C. & M. C. 9.
Lark, R. P. Lightfoot 1.
Jacobs, Houston-Gulf Gas 3.
Brown, Houston-Gulf Gas 4.
Rigs, 0; wells drilling, 4; total, 4.

ROCKDALE-MINERVA

Rigs

Hamilton, Rockdale Junior Oil 2.
Gaither, Milam Pro. 3.
Hamilton, Earnest Oil 3.

Wells Drilling

Chambers, Roundtree et al 5.
Coulter, Clear Lake Oil 5.
Hamilton, Anchor Oil 2.
Sterisky, Luckey & Gambel 1.
Kirschin, Palmer & Noack 1.
Horton, Fogle Oil 2.
Rigs, 3; wells drilling, 5; total, 8.

JIM HOGG COUNTY

Rigs

Martines, Plateau Oil 3, 4, 5.
Vala, Rydal Oil 2.
Vala, Norcross et al 1.

Wells Drilling

Martinez, O. W. Killiam, 13.
Vala, Kisselman & Stalbans 19, 20.
Vala, Rydal & Texas Oil Joint 1.
Banks, Magnolia Pet. 1.
Banks, Andrews Pet. 1.
Vala, Beauchamp Pet .1.
Well, Grayburg Oil 1.
Rigs, 5; wells drilling, 8; total, 13.

LOCKHART

Rigs

Cardwell, Quaker Oil 4.
Cardwell, Harper et al 2.
Palmer, Quaker Oil 7, 8.
Gomillion, Grayburg Oil 11, 12.
Cardwell, Humble Oil & Refg. 15, 16, 17, 18.
A. T. Cardwell, Gulf Prod. 18, 19, 20.
Beaty, Magnolia Pet. 18, 19.

Wells Drilling

C. H. Beaty, Gulf Prod. 19, 20, 21.
Riddle, Gulf Prod. 3, 4.
A. T. Cardwell, Gulf Prod. 11, 12, 13, 14.
M. L. Brewer, Gulf Prod. 20, 21, 22.
F. A. Cardwell, Gulf Prod. 3, 4.
F. A. Cardwell, Eagle Drlg. 3, 4,
Cardwell, Humble Oil & Refg. 8, 9, 10, 11, 12, 13, 14.
F. A. Cardwell, Witherspoon Oil 5, 6, 7, 8, 9, 10, 11.
Beaty, C. M. Cope, 6, 7.
Beaty, The Texas Co. 12, 14, 15, 16.
Beaty, Magnolia Pet. 10, 11, 12.
Holmes, Wilforce et al 1.
Thomas, Armstrong Bros. 4.
H. F. Brewer, Evans Oil 1.
Gomillion, Sun Co. 18, 19, 20, 21, 22.
A. F. Brewer, Humble Oil & Refg. 6, 7, 9, 10, 12.
Gomillion, Marland Oil 7, 8, 9, 10.
Beaty, Randolph & Pope 5, 6.
Palmer, Lucey Pet. 3, 4.
Riddle, C. M. Cope, 3.
Gomillion, Grayburg Oil 9, 16.
Rigs, 15; wells drilling, 63; total, 78.

GULF COAST

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Batson	4	1,515	0	0	0	1	1
Big Creek	3	50	2	0	0	3	3
Blue Ridge	0	0	0	0	0	2	2
Damon Mound	1	0	1	0	0	1	1
Goose Creek	3	175	1	0	1	9	10
Humble	2	60	0	0	1	6	7
Hull	13	8,175	3	0	2	9	11
Jennings, (La)	3	500	2	0	0	2	2
High Island	1	25	0	0	1	4	5
Lockport (La)	0	0	0	0	1	7	8
Markham	1	0	1	1	1	2	3
Orange	8	1,695	1	1	2	17	20
Spindletop	2	15	1	0	1	4	5
Saratoga	2	0	2	0	0	3	3
Sour Lake	2	0	2	0	1	5	5
South Liberty	10	945	5	0	0	5	5
Vinton (La.)	5	2,510	0	0	0	10	10
W. Columbia	3	200	1	1	0	1	1
Miscellaneous	13	0	10	3	21	78	99
Total Aug.	76	15,925	31	6	34	168	202
Total July	95	40,094	30	1	62	165	227
Difference	19	24,169	1	5	28	3	25

WELLS COMPLETED

BATSON

Paraffine, Ada Belle Oil 93 ..... sw
Hodges, Anderson & Munson 2 dpnd.. 1500
Paraffine, Paraffine Oil 42 5
Milhome, S. R. Buchanan, 23..... 10

Wells completed 4
Production 1515

BIG CREEK

Davis, Gulf Prod. 23..... 50
Davis, Union Sulphur, 33, 35..... abd

Wells completed 3
Production 50
Abandoned 2

DAMON MOUND

Bryan, Hamm & Co. 3..... abd

Wells completed and abandoned.... 1

GOOSE CREEK

Chapman-Bryan, Gulf Prod. 10..... 75
State land, Gulf Prod. 11..... 100
Dannebaum, La Rue Oil 1..... abd

Wells completed 3
Production 175
Abandoned 1

HULL

Abel, Humble Oil & Refg. 2-A..... 75
Sterling, Humble Oil & Refg. 1..... abd
Merchant, Humble Oil & Refg. 4.....4500
Carr, Sun Co. 7 (wo) 50
Hannah, The Texas Co. 5..... 500
Barngrover, Empire Gas & Fuel 7.... abd
Seal, Sterling Oil 1..... abd
Merchant, Yount-Lee Oil 8..... 150
Phoenix, Gulf Prod. 35 (wo)..... 150
Phoenix, Gulf Prod. 12 (wo) 100
Phoenix, Gulf Prod. 54..... 300
Merchant, Higgins Oil & Fuel..... 2000
Dolbear, Republic Prod. 85..... 350

Wells completed 13
Production 8175
Abandoned 3

HIGH ISLAND

Broussard, Sun Co. 1..... 25

Wells completed 1
Production 25

JENNINIGS

S. F. S. Port City Oil 3..... abd
Fontent, General Prod. Co. 5..... abd
Latrielle, The Texas Co. 19..... 500

Wells completed 3
Production 500

MARKHAM

Myers, Houston-Gulf Gas Co. 1..... gas
Gray, Rycade Pet. 3..... sw

Wells completed 2
Salt water 2
Gas 1

ORANGE

Winifree, Gulf Prod. 8..... 500
Moore, Atlantic Oil Prod. 4 (wo)..... 25
Chesson, Continental Oil 18..... 250
Chesson, Continental Oil 5 (wo)..... sw
Johnson, Sun Co. 1..... gas
Gunstream, Sun Co. 4 300
Winifree, Gulf Prod 3-A..... 500
Chesson, Humble Oil & Ref. 22-B..... 220

Wells completed 8
Production 1695
Gas 1
Salt water 1

SPINDLETOP

Gladys, McKinney Oil 2..... 15
Gladys, Gulf Prod. 214..... abd

Wells completed 2
Production 15
Abandoned 1

SARATOGA

Fountain, Rio Bravo Oil 1 ..... sw
Parrish, E. W. Skinner 1..... sw

Wells completed and salt water.... 2

SOUR LAKE

Minor, Lake View Oil 6..... abd
Bornack, McNamara Oil 1..... abd

Wells completed and abandoned.... 2

SOUTH LIBERTY

Deussen, Associated Oil 1-B..... abd
Pickett, Humble Oil Refg. 1-A..... abd
Deussen, Gulf Prod. 8-A..... 200
Van de Venter, Gulf Prod. 2 ..... abd
Simms, The Texas Co. 6..... 100
Simms, The Texas Co. 5..... 45
Deussen, Humble Oil & Refg. 2..... abd
Deussen, Gulf Prod. 5-A..... 200
Pickett, Hofer Oil 2..... abd
Deussen, Gulf Prod. 10..... 400

Wells completed 10
Production 945
Abandoned 5

VINTON

Vincent, The Texas Co. 15..... 10
Gray, The Texas Co. 3-A 1000
Gray, Vinton Pet. 2..... 150
Vinton, Gulf Refg. 40..... 1200
Vincent, Edgerly Pet. 6..... 150

Wells completed 5
Production 2510

WEST COLUMBIA

Tyndale-Wyoming, Humble Oil & Refg. 14 10
Wilson, Humble Oil Refg. 2..... 250
Lee, Hyde Prod. 1..... gas

Wells completed 3
Production 260
Gas 1

MISCELLANEOUS

Fort Bend County—
F. Meier, Rycade Pet. 2..... abd
Nash, Rycade Pet. 4..... abd
Moore, Marland Oil 1..... abd
Moore, Gulf Prod. 4..... abd
Lockwood, Marland Oil 4..... abd
Harris County—
Hockley, Warren, The Texas Co. 3..... abd
Jefferson County—
Thomas, Gulf Prod. 2..... abd
Klerburg County—
Bennett, Humble Oil & Refg. 1..... gas
Matagorda County—
Craig, Gulf Prod. 2..... abd
Neuces County—
Callellen, H. H. Givens 1..... gas
Wharton County—
Boling dome, Felder, Gulf Prod. 3..... abd
Refugio County—
Rock, Houston Oil 1..... gas

SOUTH LOUISIANA

Calcasieu Parish—
Calcasieu Land Co., Rycade Pet. 1.... abd

Wells completed 13
Gas 3
Abandoned 10

RIGS AND WELLS DRILLING

BATSON

Wells Drilling

Donohoe, East Batson Oil 9 (s.d.)
Wells drilling, 1.

BLUE RIDGE

Wells Drilling

Robinson, The Texas Co. 13.
Blakely, Gulf Prod. 11-C.
Wells drilling, 2.

BIG CREEK

Davis, Gulf Prod. 24.
J. P. Davis, Gulf Prod. 4.
Davis, Union Sulphur 34.
Wells drilling, 3.

DAMON MOUND

Rigs

Bryan, Hamm & Co. 4.
Rigs, 1.

GOOSE CREEK

Rigs

Beaumont, Gulf Prod. 33.

Wells Drilling

State land, Gulf Prod. 3, 11 (wo)
Beaumont, Gulf Prod. 32.
Scorrgea, Bruce Pet. 3.
Galliard, Gulf Coast-Crown Central 27.
Denneabum, La Rue Oil 3 (s.d.)
Smith, Humble O. & R. 63, 64.
Peninsula, Humble O. & R. 28.
Rigs, 1; wells drilling, 9; total, 10.

HUMBLE

Rigs

Landslide, Southern Pet. 46.

Wells Drilling

House, West Production 24.
House, The Texas Co. 19.
Hermann, J. M. Hester 72.
Riverside, Frank Long 1.
Burt, Jos. Long 3.
E. Weed, Meskell & Meskell 16.
Rigs, 1; wells drilling, 6; total, 7.

HULL

Rigs

Phoenix, Gulf Prod. 56, 57.
Scarborough, Gulf Prod. 6.

Wells Drilling

Phoenix, Gulf Prod. 55.
Dolbear, Republic-Houston Oil 20, 85, 117.
Guedry, Humble Oil & Refg. 9.
Hannah, The Texas-Vacuum 6.
Harrison, Peer Oil 8.
Taylor, Mecom Oil 4 (wo)
Stengler, Yount-Lee Oil 7 (s.d.)
Rigs, 3; wells drilling, 9; total, 11.

JENNINGS

Wells Drilling

Jennings-Clement, Gulf Refg. 37.
Fee, Coastal Fuel Oil 90.
Wells drilling, 2.

MARKHAM

Rigs

Myers, Houston-Gulf Gas Co. 2.

Wells Drilling

Gray, Rycade Pet. 2 (drg. dpr.).
Hawk, Barnsdall Oil 1.
Rigs, 1; wells drilling, 2; total, 3.

ORANGE

Rigs

Peveto, Rycade Pet. 1.
Bellise, Sun Co. 3 (wo.).
Chesson, Orange Pet. 9.

Wells Drilling

Peveto, Gulf Prod. 10.
Hamman Con, Gulf Prod. 3.
Chesson, Gulf Prod. 8.
Moore, Atlantic O. P. 4. (dpng.).
Cow Bayou, Rycade Pet. 2-B, 1-C.
Turner, Sinclair Oil & Gas 1.
Winifree, Humble O. & R. 12.
Shesson, Humble O. & R. 19-A.
McGuire, Kishi Dev. 6.
Winifree, Orange Pet. 5.
Chesson, Orange Pet. 6.
Chesson, Cont'l Oil 6, 16.
McLean, Brownie Babbittee Oil 3.
Brown, Brownie Babbittee Oil 2 (dpng.).
Carbello, Edgerly Pet. 1-B, 11.
Rigs, 3; wells drilling, 17; total, 20.

SPINDLETOP

Rigs

Gladys, Gulf Prod. 215.

Wells Drilling

L. S., The Sun Co. 49.
McFaddin, Unity Oil 86.
Gladys, Lotus Oil 1.
Keith-Ward, Stella Oil 7.
Rigs, 1; wells drilling, 4; total, 5.

SARATOGA

Wells Drilling

Teel, Vacuum Oil 1.
Ogden, Fountain Prod. 3.
Lewis, Paggi Bros. 7.
Wells drilling, 3.

SOUR LAKE

Rigs

Bashara, Humble Oil & Refg. 19.

Wells Drilling

Bashara, McNamara Oil 13.
Jackson, Yount-Lee Oil 4.
Bashara, Lake Graham Oil 18.
Jackson, Falloure & Herrings 3.
Hill, Barclay Oil 1.
Rigs, 1; wells drilling, 5; total 6.

SOUTH LIBERTY

Wells Drilling

Antoine, Gulf Prod. 3.
Deussen, Gulf Prod. 9-A.
Simms, The Texas Co. 7.
Condict, Sinclair Oil & Gas 4, 5.
Wells drilling, 5.

VINTON

Wells Drilling

G. N. G., Gulf Prod. 64.
Star, Gulf Prod. 41.
Lyons, Just Oil & Refg. 2.
Joynt, The Texas Co. 2.
Vincent, Vinton Pet. 16.
Rescue, Vinton Pet. 13 (s.d.).
Parks, Wilson & Broach 9.
Green, Seiss Synd. 9 (s.d.).
Vincent, Edgerly Pet. 7.
Gray, Marrs McLean 4.
Wells drilling, 16.

WEST COLUMBIA

Wells Drilling

T. & W., Humble Oil & Refg. 1 (wo.).
Wells drilling, 1.

LOCKPORT

Rigs

Prien Lake, Vacuum-Gulf Cos. 1.

Wells Drilling

Miller, Vacuum-Gulf 3, 4.
Phoenix, Vacuum-Gulf 1.
Farquhar, Vacuum-Gulf 2.
Frieberg, Vacuum-Gulf 3.
Lock-Moore, Vacuum-Gulf 3.
Phoenix, Marland Oil 1.
Rigs, 1; wells drilling, 7; total, 8.

LOUISIANA-ARKANSAS

Summary of Field Operations

Dist.—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Union Co. ..	67	28,305	10	11	28	147	175
Ouachita Co.	88	43,794	16	6	32	161	193
Nevada	0	0	0	0	2	7	9
Stephens	1	7	0	0	1	6	7
Bellevue	1	0	1	0	0	4	4
Caddo	5	182	1	0	2	23	25
Cotton Val...	7	986	0	0	15	14	29
La. wildcats	8	0	7	1	15	49	64
Ark. wildcats	12	7	11	0	8	43	51
Total Aug.	169	73,281	46	18	103	444	547
Total July	238	170,420	35	21	119	449	568
Difference	69	97,139	5	3	16	5	21

COMPLETIONS

UNION COUNTY, ARKANSAS

9-16-15 Palmer, Clark, J. W. 2 700
36-17-16 Goodwin, Constant Refg. Co. 8 80
5-16-15 James, Crawford & Sebastian 8 700
7-16-15 Tatum, Daniels & Rowe 4 ..2000
9-16-15 Palmer, Eason et al 4 ..... gas
6-16-15 Flenniken, Federal Pet. Co. 6 400
7-16-16 Rice, Gilliland, W. H. 1 150
10-16-15 Alphin, J. H., Gulf Refg. Co. 8 gas
5-16-15 Flanigan, J. Gulf Refg. Co. 17 150
8-16-15 Berry, J. A. Gulf Refg. Co. 10 150
10-16-15 Alphin, M., Gulf Refg. Co. 12 210
4-16-15 Hardy-Murphy, Gulf Refg. Co. 33 240
5-16-15 Hardy-Murphy, Gulf Refg. Co. 35 100
4-16-15 Hardy-Murphy, Gulf Refg. Co. 36 ..... gas
9-16-15 Murphy, T. C., Gulf Refg. Co. 15 195
9-16-15 Murphy, T. C., Gulf Refg. Co. 16 125
9-16-15 Murphy, T. C., Gulf Refg. Co. 19 125
9-16-15 Murphy, T. C., Gulf Refg. Co. 20, gas 200
6-16-16 Werner, Lewis, Gulf Refg. Co. 39 90
1-16-15 Graves, Hickman O. L. 1 500
6-16-16 McGraw, Higgins O. & F. 2 ... 175
6-16-16 McGraw, Higgins O. & F. 3 ... 60
10-16-15 Giller, Hollifield et al 11 200
10-16-15 Giller, Hollifield et al 12 6000
3-16-15 Milner, Houston Oil Co. 3 ..... gas
10-16-15 Pate, Humble O. & R. Co. 9 .. dry
6-16-15 Cook, Jones, W. M. 2 ..... gas
7-16-15 Bradford, Keene & Woolf 1.. 260
7-16-15 Tatum, Laurel O. & G. Co. 4 .1500
8-16-15 Bilyew, Lion O. & R. Co. B-1 100
8-16-15 Bilyew, Lion O. & R. Co. 4 ...1200
2-16-15 Graves, Lion O. & R. Co. 5 .... dry
4-16-15 Hays, Lion O. & R. Co. 3 200
10-16-15 Lawton, Lion O. & R. Co. B-4 200
8-16-15 Murphy, Lion O. & R. Co. G-4 250
35-16-16 N. J. Murphy, Magnolia Pet. Co. 1 ..... dry
10-16-15 Lawton, Mazda Oil Co. B-1 .1500
9-16-15 Murphy, T. C., Murphy O. & G. Co. 7 ..... gas
4-16-15 Wingfield, McMurray et al A-1 160
15-16-15 Ballard, Nat. Gas & Pet. Co., 2 dry
12-16-16 Houston, Nat. G. & P. Co. 1 .. gas
10-16-15 Lawton, Nat. G. & P. Co. C-2 dry
8-16-15 Murphy, Nat G. & P. Co. C-3 gas
9-16-15 Murphy, Ohio Oil Co. B-8 175
17-16-15 Murphy, Sanford; Penguin Oil Co. 3 400
11-16-15 Alphin, Phillips Pet. Co. A-3.. dry
11-16-15 Alphin, Phillips Pet. Co. A-6 dry
10-16-15 Giller, Phillips Pet. Co. 12...1000
6-16-15 Merriwether, Pure Oil 5 1500
10-16-15 Lawton, Ramage, A. H. C-6 .. dry
7-16-15 Rice, Ramey et al 1 80
6-16-15 Cook, Simms Oil Co. 9 750
5-16-15 Hatfield, Sun Co. 2 500
1-16-16 McClanahan, Sun Co. 3 200
9-16-15 Flenniken, Sunny Jim Oil Co. 1 50
5-16-15 Flenniken, Sure Oil Co. 7 ... 300
5-16-15 Wingfield, Sutton A. M. 1 ... 210
8-16-15 J. Berry, The Texas Co. B-7. 250
8-16-15 J. Berry, The Texas Co. B-8.. 250
7-16-15 Langley, The Texas Co. 2 250
6-16-15 Wilson, Thurman et al 5 1200
17-16-15 Vestal, Tidal Osage Oil 5 .... gas
8-16-15 Murphy, United Central Oil Corp. 6 3000
8-16-15 Bilyew, Unity Pet. Co. 7 200
8-16-15 Bilyew, Unity Pet. Co. B-3 250
3-16-15 Roper, Unity Pet. Co. 6 ..... dry
7-16-16 McGraw, Wetherbee et al 3.. dry

Wells completed 67
Production 28305
Dry 10
Gas 11
Gas production 230,000,000

OUACHITA COUNTY

31-15-15 B. F. Laney, Ark. Fuel Oil Co. 5 15
32-15-15 Rhoten, Bailey-Murray Oil Co. B-1 ..... gas
32-15-15 Rhoten, Bailey-Murray Oil Co. B-4 2500
29-15-17 Elliott, Cumberland Pet. Co. 2 16
30-15-15 Bradley, Empire O. & G. Co. 4 200
31-15-15 Laney, Empire G. & F. 5 .. dry
32-15-15 Bennett, Gulf Refg. Co. 4 210
32-15-15 Bennett, Gulf Refg. Co. 5 210
33-15-15 Bennett, Gulf Refg. Co. 7 500
32-15-15 Goodwin, J., Gulf Refg. Co. 6 250
32-15-15 Goodwin, J., Gulf Refg. Co. 7 .3000
32-15-15 Goodwin, J., Gulf Refg. Co. 8 300
5-16-15 Goodwin, J., Gulf Refg. Co. A-7 125
5-16-15 Flenniken, Gulf Refg. Co. 18 210
32-15-15 Umsted, Gulf Refg. Co. 5 300
33-15-15 Umsted, Gulf Refg Co. A-14.. 120
33-15-15Umsted, Gulf Refg. Co. A-15.. 115
33-15-15 Umsted, Gulf Refg. Co. A-16. 210
33-15-15 Umsted, Gulf Refg. Co. A17. 600
3-16-15 Williams, Howell et al 2.... dry
26-15-15 Arnold, Humble O. & R. B-2 50
26-15-16 Arnold, Humble O. & R. 3... 27
4-16-15 Jones-Umsted, Humble O. & R. 3 ..... dry
31-15-16 Laney, Humble O. & R. 4 ... 600
32-15-15 Laney, Humble O. & R. 5.... dry
3-16-15 Murphy, Humble O. & R. 4.. 400
3-16-15 Murphy, Humble O. & R. 5.. 75
5-16-15 Hill, Invaders Oil Co. 6 175
5-16-15 Hill, Invaders Oil Co. 7 175
22-15-17 Alexander, La. Oil & Refg.. dry
27-15-17 Tyson, La. Oil & Refg. 2... 16
5-16-15 Goodwin J., Magnolia Pet. 9 350
4-16-15 Hays, Marine Oil Co. 7 300
32-15-15 Laney, Meeks, J. H. Tr. 5 500
31-15-15 Laney, Meeks, J. H. Tr. 6 300
31-15-15 Laney, Meeks, J. H. Tr. 9 250
26-15-16 Neeley, Miles et al 4 35
5-16-15 Hill Nat. G. & P. Co. A-4.. 100
31-15-15 Laney, Nat. G. & P. Co. 6 1500
26-15-16 Arnold, Ohio Oil Co. 3 400
29-15-15 Goodwin, Ohio Oil Co. 5 ..... gas
36-15-16 Lewis, Ohio Oil Co. A-4 ..... dry
34-15-15 Snyder, Owenwood Oil Corp. 6 100
4-16-15 Umsted, Penguin Oil Co. 2 ... 175
4-16-15 Umsted, Penguin Oil Co. 3 ... 150
31-15-15 Laney, Phillips Oil Corp. 9 250
4-16-15 Umsted, Shreveport Oil Corp. 1 ..... dry
32-15-15 Berg, Simms Oil Corp. C-4 3000
28-15-15 Hildebrandt, Simms Oil Co. 4 gas
31-15-15 Hirsch, Simms Oil Co. 6 250
31-15-15 Laney, E. A., Simms Oil Co. 8 dry
31-15-15 Laney, F. A., Simms Oil Co. 9 .2000
33-15-15 Berry, Sinclair Oil Co. 7 .... dry
33-15-15 Berry, Sinclair Oil Co. 10....10000
33-15-15 Berry, Sinclair Oil Co. 11.... 500
32-15-15 R. Bennett, Standard O. C. B-5 dry
6-16-15 McClanahan, Stand. O. C. 11..3500
34-15-15 Powell, Stand. O. C. 5 ..... gas
32-15-15 Umsted, Standard Oil Co. 23.. 30
32-15-15 Umsted, Standard Oil Co. 24.. gas
5-16-15 Hill, Sure Oil Co. 3 500
34-15-15 Joyce, Sun Oil Corp. 450
31-15-15 Laney, Sure Oil Corp. B-4 190
32-15-15 McCorbey, T. & P. Coal & Oil Co. 2 ..... gas
33-15-15 Berry, The Texas Co. 13 8000
34-15-15 Johnson, The Texas Co. 7 ... 750
32-15-15 Berg, Wilroy et al 1 100
5-16-15 Fee, Wingfield et al 2 165

Wells completed 68
Production 43,794
Dry 10
Gas 6
Gas production 180,000,000

CADDO PARISH

23-22-15 Peak, Austin Oil Co. 19 12
22-22-15 Peak, Austin Oil Co. 20 15
14-21-15 Robertshaw, Dixie Oil Co. 67 15
9-20-16 JBH & FC, Reynolds Oil & Gas Co. 4 ..... dry
27-21-16 Stiles, Standard Oil Co. 172.. 150

Wells completed 5
Production 182
Dry 1

COTTON VALLEY PARISH

21-21-10 Robins, Alabama Pet. Co. 1... 250
16-21-10 R. R. Cox, Fortuna Oil Co. 2 150
15-21-10 W. Cox, Fortuna Oil Co. 4.... 100
15-21-10 Bodcau, Ohio Oil Co. 33 100
27-21-10 Gray, Ohio Oil Co. 12 156
26-21-10 Gray, Ohio Oil Co. 13 100
16-21-10 Sidney heirs, Ohio Oil Co. 4.. 130

Wells completed 7
Production 986

BELLEVUE FIELD-BOSSIER PARISH

23-19-11 B. W. Fee, Standard Oil Co. 18 dry

Wells completed 1
Dry 1

LOUISIANA WILDCATS

Bienville Parish—
20-16-7 Miles, Brown & Evans 1 ..... dry
DeSoto Parish—
21-11-12 Scott, L. V. Ulrey 1 ..... dry
Claiborne—
1-19- 6 Warren-Brown, Triangle Drlg. Co. 1 ..... dry
Grant Parish—
1- 7- 1 Ball, Grant Parish Pet. Co. 2 dry
LaSalle Parish—
14-10-1e Urania, Freeman & Hawkins 1 dry
30-10-2e Tremont Lbr. Co., Love et al 1 dry
Ouachita Parish—
32-20-4e Chambers, Nat Gas & Prod. Co. 1 ..... gas
Lincoln Parish—
7-18-2w Richardson, Ruston Drlg. Co. 1 dry
Columbus County—Stephens Field—
25-15-20 Hammond J. R., Magnolia Pet. 4 7

Wells completed 8
Production 0
Dry 7
Gas 1
Gas production 5,000,000

ARKANSAS WILDCATS

Columbia County—
14-18-20 Longino & Goode, Ark F. O. Co. 1 ..... dry
14-18-21 Doris, Phillips et al 1..... dry
Lafayette County—
13-18-24 Bodcau, Estes et al 1..... dry
3-16-23 Shertliff, Humble O. & R. Co.1 dry
28-16-14 Ford, Humble O. & R. Co. 1.. dry
26-16-25 Bradshaw, Humble O. & R. .. dry
Miller County—
35-15-26 Dale, Humble O. & R. 3 .... dry
35-16-27 Fouke, Humble O. & R. 1 .... dry
Nevada County—
34-14-22 Hamilton, Ark. Drlg. Co. 1.... dry
6-13-21 Weaver, Falcon Drlg. Co. 1.. dry
Union County—
31-16-14 Davis, Liberty Oil Co. 1..... dry

Wells completed 11
Production 7
Dry 11

UNION COUNTY

Rigs

3-16-15 Lyell, Amerada Pet. Corp. 12.
15-16-15 Murphy, Anderson et al 2.
6-16-15 Ferguson, Ark. Fuel Oil Co. 9.
1-16-17 LaGrone, Ark. Fuel Oil Co. 5.
8-16-15 Bradford, Broderick & Calvert 3.
7-16-16 Carroll, Chambles Drlg. Co. 1.
9-16-15 Palmer, J. W. Clark 5.
7-16-16 Rice, W. H. Gilliland 2.
2-16-15 Alphin, Gulf Refg. Co. 17.
7-16-16 McGraw, Higgins Oil & Fuel Co. 4.
1-16-17 Anderson, Johnson Drlg. Co. 3.
7-16-15 Murphy, Lion Oil & Refg. Co. A-6.
3-16-15 Fee, Lyell, J. S. 11.
12-16-17 Scott, Magnolia Pet. Co. 2.
9-17-16 Dumas, Raines et al 1.
6-16-15 James, A. H. Ramage 11, 12.
7-16-15 Murphy, T. D., Roxana Pet. Corp. 4.
6-16-16 Hodges, Rutledge Tr. 6.
5-16-16 Saxon, Smitherman-McDonald B-4.
3-16-15 Lyell, So. Crude O. P. Co. 6, 7.
3-16-15 Graves, So. Crude O. P. Co. 8.
9-16-15 Murphy, Stewart et al 4.
5-16-15 Wingfield, Thurman et al 4.
3-16-15 Bilyew, Unity Pet. Co., 13.
3-16-15 Roper, Unity Pet. Co. 14.
6-16-16 Holloway, Wetherbee et al 2.

Wells Drilling

4-16-15 Calloway, Amerada Pet. Corp. 6.
15-16-15 Giller, Amerada Pet. Corp. 5.
3-16-15 Lyell, Amerada Pet. Corp. 10, 11.
6-16-15 Ferguson, Ark. Fuel Oil Co. 7.
8-16-15 Murphy, Ark. Fuel Oil Co. 4.
35-15-16 Spahr, Ark. Fuel Oil Co. 3.
12-16-16 Houston, Baggett et al 1.
12-16-16 Houston, Barbara, Nick 1.
8-18-12 Garner, Bonderant et al 1.
1-16-16 Parkerson, R. A. Bristol 1.
8-16-15 Bradford, Broderick & Calvert 1.
13-16-16 Murphy, Brooks, Tr. 1.
16-16-15 Smith, J. W. Clark 3.
8-16-15 Bilyew, Coates & Sowell 3.
9-16-15 Palmer, J. W. Clark 2.
6-16-15 James, Crawford & Sebastian 9.
14-16-15 Giller, Crawford & Sebastian 6.
8-16-15 Graves, Crawford & Sebastian 8.
10-16-15 Lawton, J. E. Crosbie, A-5.
10-16-15 Lawton, J. E. Crosbie, A-6.
1-16-16 Primm, Custer & Nash 1.
7-16-15 Tatum, Rowe Daniels 5.
4-19-16 Fletcher, Doern et al 1.
15-16-15 Murphy, Eason et al 5.
9-16-15 Palmer, Eason et al 6.
10-16-15 Lawton, Federal Pet. Co. A-10.
6-16-15 Flenniken, Federal Pet. Co. 6.
16-16-16 Saxon, Fitzwater et al 1.
18-16-15 Murphy, George & Jones 5.
2-16-15 Alphin, Gulf Refg. Co. 14, 15.
7-16-15 J. A. Berry, Gulf Refg. Co. 9.
7-16-15 Fagg, Gulf Refg. Co. 2, 3.
13-16-15 Howard, Gulf Refg. Co. 1.
16-16-15 LeCroy, Gulf Refg. Co. 7.
4-16-15 Hardy-Murphy, Gulf Refg. Co. 34.
7-16-15 T. D. Murphy, Gulf Refg. Co. 3.
6-16-15 Werner Saw Mill, Gulf Refg. Co. 40.
18-16-15 Smith, Henderson, F. C. 2.
8-16-15 Graves, Hickman et al 11.
3-16-15 Flenniken, Humble O. & R. Co. A-4, A-6.
8-16-15 B. Goodwin, Humble Oil & Ref. Co. 4.
7-16-15 Lawton, Humble Oil & Ref. Co. A-3, A-4.
9-16-15 Murphy, Imperial O. & G. Co. 8, 9.
1-16-17 Anderson, Johnson Drlg. Co. 4.
16-16-15 Cook, E. M. Jones 4.
9-16-15 Murphy, J. S., Keene & Wolf 1.
3-16-15 Williams, Kennebrew et al 1.
12-16-16 Houston, Laurel O. & G. Co. 2.
10-16-15 Lawton, Lion O. & R. Co. A-7.
16-16-15 LeCroy, Lion Oil & R. Co. 1.
7-16-15 Murphy, Lion Oil & R. Co. A-8, A-9, A-10.
8-16-15 Murphy, Lion Oil & R. Co. C-7, C-5, C-8, B-2, G-3.
3-16-15 Fee, J. S. Lyell, 4, 7.
13-16-17 Campbell, Magnolia Pet. Co. 5.
4-19-14 Chandler, Magnolia Pet. Co. 1.
15-16-15 Hatfield, Magnolia Pet. Co. 6.
1-16-17 Stout Lumber Co., Magnolia Pet. Co. 3.
10-16-15 Lawton, Mazda Oil Co. R-3, R-4.
5-16-15 Flenniken, Moco Oil Corp. 2.
5-16-15 Flenniken, Moco Oil Corp. 4.
14-16-15 Hays, Murdock et al 7.
15-16-15 Ballard, Nat. Gas & Prod. Co. 4.
8-16-15 Murphy, Nat. Gas & Prod. Co. C-4.
18-17-14 Allen, J. L. Nelson 4.
21-18-10 Ark. Timber & Land Co., Ohio Oil Co. 1.
10-16-15 Pate, Ohio Oil Co. 11.
9-16-16 Powell, Olds et al 3.
11-16-15 Barnett, G. H. Pace 1.
6-16-15 Ferguson, Parrish et al 3.
8-16-15 Murphy, G. E., Penguin Oil Co. 4, 5.
10-16-15 Giller, Phillips Pet. Co. 13.
7-16-15 Thompson, Phillips Pet. Co. 2, 4.
8-16-15 Bilyew, Pure Oil Co., B-2.
6-16-15 Merriwether, Pure Oil Co. 6.
6-16-15 Friend, Pure Oil Co. 4.
10-16-15 Lawton, A. H., Ramage, C-2.
6-16-15 James, A. H., Ramage 10.
6-16-15 Bradford, Richardson, Joyce 3.
10-16-15 Lawton, Richardson, Sam 5.
7-16-16 Rice, Ramey et al 2.
5-16-15 Wingfield, Riggs Drlg. Co. 1.
10-16-15 Flenniken, A., Roxana Pet Corp. A-2.
7-16-16 Carruth, Rutledge, Tr. 2.
9-16-15 Murphy, Shreveport Oil Corp. B-2.
16-16-15 Cook, Simms Oil Co. 8.
23-16-16 Dumas, Smitherman-McDonald 1.
3-16-15 Lyell, So. Crude Oil Prod. Co. 5.
10-16-15 M. W. Hardy, Standard Oil Co. 22.
9-16-15 M. W. Hardy, Standard Oil Co. 28.
4-16-15 M. W. Hardy, Standard Oil Co. 35.
18-17-14 Polk & Ezell, Jim Stock 1.
3-16-15 Hays, Sun Co., 4, 18.
8-16-15 Berry, J., The Texas Co. B-5.
4-16-15 Calloway, The Texas Co. 7.
3-16-15 Graves, The Texas Co. 7, 8.
4-16-15 Hays, The Texas Co. 4.
7-16-16 Langley, The Texas Co. 3.
12-16-16 Houston, Thurman et al 1.
5-16-15 Wingfield, The Texas Co. 3.
8-16-15 Bilyew, Unity Pet. Co. B-8.
3-16-15 Bilyew, Unity Pet Co. 11, 12.
12-16-16 Kane, Vance et al 1.
16-16-15 Goodwin, Ward et al 1.
12-18-14 Morrison, Wabler et al 1.
7-16-16 McGraw, Wetherbee et al B-3.

Shut Down

4-16-15 Calloway, Amerada Pet. Corp. 5.
10-16-15 Lawton, Bailey & Trimble 5.
17-16-15 Murphy, J., Barnsdale & Foster 2, 3.
15-16-15 Wells, Clark & Melat A-2.
7-16-15 Tatum, Daniels, Rowe 3, 1, 2.
10-16-15 J. H. Alphin, Gulf Ref. Co. 10.
8-16-15 Graves, Hickman et al 9.
7-16-15 Lawton, Humble Oil & Ref. Co. B-1.
10-16-15 Pate, Humble Oil & Ref. Co. 5.
9-16-15 Hardy-Murphy, Lion Oil & Ref. Co. A-4.
5-16-15 Wingfield, McDonald et al 1.
5-16-15 Flenniken, Moco Oil Corp. 3.
9-16-15 Ballard, Nat. Gas Prod. Co. 3.
7-16-15 Murphy, Page et al 6, 1.
10-16-15 Flenniken, Roxana Pet. Corp. A-1.
6-16-15 McClanahan, Sure Oil Co. 5.
15-16-15 Murphy, Sure Oil Co. 3.
11-16-15 Hicks, Ward et al 1.
10-16-15 Lawton, Winger et al 1.
Rigs, 28; wells drilling, 147; total, 175.

OUACHITA COUNTY

Rigs

34-15-16 Turnage, Ark. Drlg. Co. 1.
31-15-15 B. T. Laney, Ark. Fuel Oil Co. 6.
32-15-15 Rhoten, Bailey & Murray B-5.
4-16-15 Murphy, Clark & Melat 4.
33-15-15 Berry, J. E. Crosbie 14.
28-15-15 Hilderbrandt, Humble O. & R. Co. 8.
7-14-19 Smith Bros. Humble O. & R. Co. 1.
6-15-15 McClanahan, Imperial O. & G. P. Co. 9.
35-15-17 Bettie Clawson, Magnolia Pet Co. 2.
26-15-17 Brown, Magnolia Pet. Co. 4.
25-15-17 Smith, McCorkle et al B-2.
26-15-16 McKenzie, J. H. Meek, Tr. 10.
26-15-15 Lewis, Ohio Oil Co. 4.
27-15-16 Hardin, Penguin Oil Co. 4.
30-15-15 Laney, Phillips Pet. Co. 3.
32-15-15 Rhoten, Sam Richardson 2.
27-15-15 Reynolds, Roxana Pet. Corp. 2.
32-15-15 Reynolds, Simms Oil Co. 6.
32-15-15 R. Bennett, Standard Oil Co. 7, 8.
33-15-15 Griffin, Standard Oil Co. 10.
32-15-15 Umsted, Standard Oil Co. 25, 27, 28 29, 30, B-6, B-8.
28-15-16 Hughes, Sutton et al 10.
27-15-15 Watt, The Texas Co. 1.
2-16-15 Henry-Murphy, Unity Pet. Co. 2.
33-15-15 Umsted, Unity Pet. Co. 9.

Wells Drilling

34-15-15 Snyder, Ark. Fuel O. Co. 9.
4-16-15 Murphy, Clark & Melat 3.
31-15-15 Laney, Colcord et al A-2, A-3.
33-15-15 Berry, J. E. Crosbie 11, 12, 13.
36-15-16 M. McKenzie, Duho Oil Co. A-1.
17-12-15 Eagle Lbr. Co., El Dorado Union Oil Co. 1.
30-15-15 Bradley, Empire O. & F. Co. 6.
26-15-16 Neely, Giles et al 2, 4.
30-16-17 Myar, Gilliland Oil Co. B-6.
5-16-15 Williams, Grayson et al 2.
33-15-15 Bennett, R., Gulf Ref. Co. 8.
32-15-15 Bennett, S., Gulf Ref. Co. 6.
32-15-15 Goodwin, B., Gulf Ref. Co. 9, 10, 11.
32-15-15 Goodwin, J., Gulf Ref. Co. 8.
5-16-15 J. Goodwin, A-8, A-9, A-10.
32-15-16 Umsted, Gulf Ref. Co. 6.
33-15-15 Umsted, Gulf Ref. Co. A-18.
34-15-15 Scott, Gulf Ref. Co. 2.
5-16-15 Hinton, Houston Oil Co. 9.
31-15-15 Laney, B. T., Houston Oil Co. 9.
27-15-15 Reynolds, Houston Oil Co., 5, 6, 4.
3-16-15 Williams, Howell et al 5, 6.
26-15-16 Arnold, Humble O. & R. Co., B-4.
34-15-15 Farris, Humble O. & R. Co. 5.
6-16-15 Flannigan, Humble O. & R. Co. 6.
28-15-15 Hildebrandt, Humble O. & R. Co. 7.
31-15-15 F. A. & B. T. Laney, Humble O. & R. Co. 9.
31-15-15 Laney, H., Humble O. & R. Co. 3.
34-15-15 Woods, Humble O. & R. Co. 1.
6-15-15 McClanahan, Imperial O. & F. P. Co. 8, 10.
26-15-18 Wilson, E. M. Jones 1.
35-15-17 Bettie Clawson, Magnolia Pet Co. 2.
5-16-15 Goodwin, J., Magnolia Pet. Co. 7, 8.
4-16-15 Hays, Marine Oil Co. 3.
34-15-15 Snyder, Marine Oil Co. 5, 10.
5-16-15 Umsted, Marine Oil Co. 9.
3-16-15 Fee, Marr, Pat. 1, 2.
31-15-15 Laney, Nat. Gas & Pet. Co. 9.
26-15-15 Lewis, Ohio Oil Co. 2, 5.
34-15-15 Johnson, D. N., Phillips Pet Co. 7.
33-15-15 Joyce, Phillips Pet Co. 11, 8, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22.
31-15-15 Laney, Phillips Pet. Co. 10, 11, 12
28-15-15 Brister, Pure Oil Co. 5, 9.
27-15-17 Berg, Reynolds et al 4.
5-16-15 Wingfield, Riggs Drlg. Co. 1.
35-15-15 Avera, Roxana Pet. Corp. 1.
32-15-15 Bennett, Roxana Pet. Corp. A-4, A-3.
31-15-15 Laney, Roxana Pet. Corp. A-1.
27-15-16 Reynolds, Roxana Pet. Corp. 1.
34-15-15 Williams, Roxana Pet. Corp. 3.
4-16-15 Umsted, Shreveport Oil Corp. 4.
31-15-15 Hirsch, Simms Oil Co. 7, 8.
34-15-15 E. Johnson, Simms Oil Co. 2.
31-15-15 Laney, D. D., Simms Oil Co. 5.
31-15-15 Laney, F. A. Simms Oil Co. 10.
29-15-15 Murphy, N. B., 5.
32-15-15 Reynolds 5, 7, 8.
33-15-15 Berry, Sinclair O. & G. Co. A-7, 12, 13, 14, 15.
34-15-15 Joyce, Southern Crude O. P. Co. 5.
32-15-15 R. Bennett, Standard Oil Co. 4.
33-15-15 R. Bennett, Standard Oil Co. 7.
33-15-15 J. Griffin, Standard Oil Co. 9.
4-15-15 M. W. Hardy, Standard Oil Co. 30, 36.
29-15-15 S. L. Johnson, Standard Oil Co. 5.
29-15-15 Murphy, Standard Oil Co. B-7.
34-15-15 Powell, Standard Oil Co. 6.
27-15-15 Reynolds, Standard Oil Co. 2.
32-15-15 Umsted, Standard Oil Co. 26, B-5, B-7.
30-15-15 Johnson, Sun Oil Co. 5, 6, 7.
5-16-15 Hill, Sure Oil Co. 2.
34-15-15 Joyce, Sure Oil Corp. 5.
34-15-15 Snyder, Sure Oil Corp. 2, 3.
28-15-16 Hughes, Sutton et al 9.
30-15-17 Burton, Swartz et al 2.
31-15-15 Laney, T. P. Coal & Oil Co. 8.
33-15-15 Berry, The Texas Co. 12, 14, 15, 16.
34-15-15 Johnson, The Texas Co. 6, 9.
35-15-15 Johnson, The Texas Co. 10.
27-15-16 Neely, The Texas Co. 2.
5-16-15 Wingfield, Thurman et al 3.
4-16-15 Fee, Sid Umsted 3.
27-15-17 Berg, O. F. Whittaker 2.
28-15-15 Berg, Wilroy et al 1.

Shut Down

30-15-15 Berg, Atlantic O. P. Co. 5, 6.
33-15-15 Berry, Crosbie, J. E. 10.
29-15-16 Fincher, Hall & Williams 1.
22-15-17 Riley, Hammon et al 1.
14-15-17 Elliott, Hemphill et al 1.
5-16-15 Hill, Invaders Oil Co. 1.
27-15-16 Hardin, Penguin Oil Co. 3.
25-15-17 Keller, J. D., Reynolds 1.
35-15-15 Avera, Roxana Pet. Corp. 2.
28-15-15 Berg, Roxana Pet. Corp. A-4.
34-15-15 Joyce, Southern C. O. P. Co. 4.
33-15-15 Umsted, Standard Oil Co. 12.
31-15-15 Laney, T. P. Coal & O. Co. 6.
34-15-15 Johnson, The Texas Co. 8.
22-14-17 Yarborough, Vandiver et al 1.
26-15-15 Martin, C. W. White 1.
26-15-15 Watts, C. W. White 1.
5-16-15 Goodwin, Wilson Pet. Co. 1.
35-15-15 Langley, Woodley Pet. Co. 1, 2.
Rigs, 32; wells drilling, 151; total, 183.

COTTON VALLEY DISTRICT

Rigs

24-21-10 Pardee, Alabama Pet. Co. A-4, B-2.
15-21-10 R. R. Cox, Fortuna Oil Co. 4.
20-23-11 Weghost, J. F. Giles, Tr. 1.
15-21-10 Bodcau, Humble Oil & R. Co. B-21.
13-21-10 Bodcau, Humble Oil & R. Co. C-2.
28-21-10 Nelson, McDowell et al 3.
22-21-10 C. V. Bank, Ohio Oil Co. 2.
15-21-10 Bodcau, Ohio Oil Co. 32.
26-21-10 Gray, Ohio Oil Co. 3.
23-21-10 Holloway, Ohio Oil Co. 2.
27-21-10 Sandlin, Ohio Oil Co. 1.
26-21-10 Glenn, Tidal Oil Co. 2.
26-21-10 Gray, Woodley Pet. Co. 4.
27-21-10 Gray, Woodley Pet. Co. B-1.

Wells Drilling

8-20-10 Bible, Fortuna Oil Co. 1.
15-21-10 R. R. Cox, Fortuna Oil Co. 3.
24-23-20 Maynor, Fortuna Oil Co. 2.
15-21-10 Bodcau, Humble O. & R. Co., B-20.
25-21-10 Weaver Bros., Humble O. & R. Co. 3.
25-21-10 Bodcau, La. O. & R. Co. 3.
15-21-10 Bodcau, Ohio Oil Co. 34.
26-21-10 Gray, Ohio Oil Co. 14, 15.
29-21-10 Davis, Palmer Corp. 1.
27-21-10 Jackson, Standard Oil Co. 1.

Shut Down

13-21-10 Bodcau, Humble O. & R. Co. B-5.
19-20-10 Ambrose, Kennedy et al 1.
22-21-10 Hortman, McDowell et al 1.
Rigs, 15; wells drilling, 14; total, 29.

NEVADA COUNTY

Rigs

10-14-21 Womack, Autrey Oil Co. 3.
10-14-21 McKinney, Smitherman - McDonald 6.

Shut Down

2-14-21 Ellis, Greason et al 1.
10-14-21 McKinney, Greason et al 1, 2, 3.
10-14-21 Drake, Smitherman-McDonald 3.
11-14-21 Wallace, Steele et al 1.
10-14-21 McKinney, Zing et al 1.
Rigs, 2; wells drilling, 7; total, 9.

OUACHITA COUNTY, STEPHENS FIELD

Rigs

27-15-19 Morgan, Equity Oil & Dev. Co. 1.

Wells Drilling

22-15-19 Morgan, Buffalo Oil Co. 1, 2.
22-15-19 Davis, Buffalo Oil Co. 1.
7-14-19 Smith, Humble Oil & Ref. Co. 1.

COLUMBIA COUNTY, STEPHENS FIELD

Wells Drilling

36-15-20 Rhinehart, Magnolia Petroleum Co. 3.

Shut Down

13-15-20 Brown, Hude & Aarnes 2.
Rigs, 1; wells drilling, 6; total, 7.

BELLEVUE FIELD

Wells Drilling

23-19-11 Bliss & Wetherbee fee, Wetherbee, G. W. 10.
24-19-11 Beirly, Wetherbee, G. W. 1.
14-19-11 Crawford, Wetherbee, G. W. 1.

Shut Down

28-19-11 McDade, Osborne et al 1.
Rigs, 0; wells drilling, 4; total 4.

CADDO PARISH

Rigs

10-18-16 Sharp, R. T., Brewer & Sewall 1.
3-15-15 Duke Williams, Ridge Oil Corp. 1.

Wells Drilling

22-22-15 Peak, Austin Oil Co. 20.
24-22-15 Hoss, Austin Oil Co. 23.
27-22-15 Jolly, Dixie Oil Co. 1.
13-21-15 Robertshaw, Dixie Oil Co. 53.
24-22-15 Hoss, Dixie Oil Co. 1.
15-21-15 Spell, Double J Oil Co. 4.
8-16-15 Simpson, Flourney, Tr. 1.
5-20-15 Doan-Thigpen, Fortuna Oil Co. 15.
8-20-15 Levee Board, Fortuna Oil Co. 2.
17-18-16 Mitchell, Fortuna Oil Co. 1.
8-19-16 Louisiana Live Stock & Planting Co., Haynes Bros. 1.
29-22-15 Caldwell, Henderson et al 1.
27-20-16 Green, Louisiona Oil Ref. Corp. 17.
22-21-15 Raines, Lewis Oil Corp. 11.
12-21-15 Smith, E. K., Ohio Oil Co. 17.
34-16-12 Hutchinson, Roy et al 2.
17-17-16 Bryson, Shreveport Prod. & Ref. Co. 1.
17-15-12 Huron Land Co., The Texas Co. 5.
27-21-16 Levee Board, The Texas Co. 58.

Shut Down

30-19-15 Dickerson, Arkansas Caddo Oil Co. 1.
32-19-15 Bickham, Richardson, D. C. 2.
27-21-16 Stiles, Standard Oil Co. 171.
15-21-16 Federal Jeems Bayou, The Texas Co. 1.
Rigs, 2; wells drilling, 23; total, 25.

LOUISIANA WILDCATS

Rigs

18-17-11 Murff, Corbett et al 1.
33-12- 4 Winson, Beckner et al 1.
5-19- 5 Taylor, Evans & McMurphy 2.
23-21- 5 Patton, Ohio Oil Co. 1.
26-10- 1 State, Alexandria Urania Oil Co. 1.
36-10- 1 King, Craig et al 1.
24-10- 1 Russell, Davis & Meredith 1.
25- 8- 4 Rich, Mitchell et al 1.
27-10- 2 Louisiana Central Lumber Co., White, J. R. 1.
19-10-2e Urania, Urania Pet. Co. 8.
23-15-3e Cordell, Culver et al 2.
1-19- 4 Central, Palmer Corp. 1.
8-20- 4 Ford, Ruston Drlg. Synd. 1.
16-21- 4 Union Parish School Board, Natural Gas Producing Co. 1.
6-23- 2 Jones, W. M., Rhodes, R. N. 1.

Wells Drilling

8-15- 5 Hunt-Lodge Lbr. Co., Smitherman, J. E. 1.
25-16-12 Hodges, McCullough, J. S., Tr. 1.
20-23-12 Chamlee, Woodley & Collins 1.
7-19- 5 Keen, Triangle Drlg. Co. 1.
32-12-15 Alexandria, Fortuna Oil Co. 1.
31-13-11 Willis Williams, Gulf Ref. Co. C-18
20- 9- 1 Holmes, Dowling & McCurry 1.
25-10- 1 King, Finn & Ball 1.
22-10- 1 Harper, Gould & Monroe Drlg Co. 1.
28-11- 2 Urania, Helm & Burch 1.
10-10- 2 Urania, Imperial Oil & Gas Co. 1.
30-10- 2 Tremont Lbr. Co., Love et al 2.
19-10- 2 Hardtner, Zeigen et al 1.
13-20- 3 Barrett, Buckner et al 1.
7-18- 2 Richardson, Ruston Drlg. Co. 1.
11-21- 7 Sullivan, Boisseau, R. C., et al 1.
9-21- 4 Tensas Delta Land Co., Natural Gas Producing Co. 6.
10-19- 5 Collins, Consumers Gas Co. 1.
24-18- 3 Goodwin, Dickinson & Frue 1.
12-19- 4 Kerr, Southern Carbon Co. 3.
42-20- 4 Liston-Waddle, Ouachita Natural Gas Co. 2.
32-20- 4 Johnson, Natural Gas Producing Co. 1.
6-16- 5 Jones, Palmer Corp. 1.
15-19- 5 Lewis, Union Gas & Power Co. 1.
9- 7-12 Bowman-Hicks, Emlet, L. M., 5, 6.
18- 4-11 Wyatt, Lbr. Co., Toro Pet. Co. 1.
29- 5- 2 Barrow, Hinsey & Mack 1.
3- 4- 3 Lanie Oil Co., Wheeler & Willbanks 1.
32-22- 4 Grayline, Natural Gas Producing Co. 3.
6-19-23 Feazel, Jones & Walker 1.
5-12- 1 Rowland, Ohio Oil Co. 1.

Shut Down

8-18-12 Finuf, Best Oil Co. 1.
2-18-12 Wutze, Clark, Clem 1.
31-21-11 Rhodes, Coker et al 1.
3-18-12 Atkinson, Corbet et al 1.
9-18-11 Webster, Kendrick et al 1.
13-16-12 Levison, Wilder & Cushman 1.
21-14- 4 Fee, Culver et al 1.
20-21- 8 Aubry, Block Oil & Gas Co. 2.
5-21- 6 Heard, Clark & Melat 1.
7-19- 5 Cox, Triangle Drilling Co. 1.
14- 7- 1 Selmer Lbr. Co., Grant Parish Pet. Co. 1.
13.14- 4 Rhymes, El Dorado Chief Oil Co. 1.
22-10- 2 Urania, Columbia Oil & Gas Co. 1.
10-10- 2 Hardtner, Rowe et al 1.
19-10- 2 Love, Wright et al 1.
13-20- 4 Perry, McKenzie et al 1.
6-10- 2 Eagles, Hall, J. H. 1.
Rigs, 15; wells drilling, 49; total, 64.

ARKANSAS WILDCATS

Rigs

33-16- 7 Fee, Brown et al 1.
1-17- 6 Pine Prairie, Pine Ferry Oil Co. 2.
36-12- 9 Brown, Easley et al 1.
29-15-14 Calion Lbr. Co., Magnolia Pet. Co. 1.
12- 9-20 Arnold, Virgil Heath 1.
15-17-22 Gantt, Maier, R. F., et al 1.
29-10-16 Owens, McNeill et al 1.
22-14-26 Gillespie, Munn Oil & Gas Co. 1.

Wells Drilling

20-15- 7 Bledsoe, Rhodes & Kirker 1.
25-15- 9 Benson, Gulf Ref. Co. 1.
11-16-10 Sabine Lbr. Co., The Texas Co. 1.
24-15-15 Freeman Lbr. Co., Genthre et al 1.
3-18-20 Pearce, Greason et al 1.
17-17-18 Hines, J. D., Gulf Ref. Co. 1.
20-18-22 Hamp-Dickens, Pluto Oil Co. 1.
23-18-23 Robinson, Pluto Oil Co. 2.
35-13- 5 Ogle, McClintock &Goodka 1.
14-11-25 Safford, Tarver et al 1.
18-19-24 Allen, Arkansas Fuel Oil Co. 1.
17-16-23 Bodcau-Fee, Humble Oil & Ref. Co. 1.
16-15-22 Reed-Bodcau, Humble Oil & Ref. Co.
3-20-24 Red River Land Co., Kensas Pet. Co. 2.
2-15-26 Harvey, Clifford Nash 2.
36-15-27 Wiseman, Coplen et al 1.
20-17-27 Faulk, Davidson et al 1.
2-16-27 Faulk, Hubble Oil & Ref. Co. 2.
2-17-26 Dorsey, Humble Oil & Ref. Co. 1.
3-15-21 Johnson, B. F., Magnolia Pet. Co. 1.
9-15-22 Fincher, Steele et al 1.

Shut Down

26-16-13 Freeman-Smith, Harris & Bickley 1.
29-12-15 Eagle Lbr. Co., Murdock et al 1.
35-10-20 Burroughs, Southern Drlg. Co. 1.
28- 9-10 Moore, Haley et al 1.
24-17-22 Sauter, Hargis et al 1.
30-19-18 Hays, Hosey & McDonald 1.
18-17-22 Burrell, Johnson et al 1.
29-19-10 Peter Doss, Ky-Ark Pet. Co. 1.
20-16-12 Watts, Miller et al 1.
7-19-19 Emerson, Russell & Kent 1.
35-18-19 Duffer, Smith & Compton 1.
4-20-21 Bodcau, Wingfield & Mitchell 1.
10-12- 8 Karnes, Graves et al 1.
27.22-27 Hempstead Co. Gun Club, Grassy Oil Asso. 1.
17-11-25 Nichols, Hempstead Oil Co. 1.
32-11-24 Clarke, Wooten, J. G. 1.
9-11-23 Sutton, Zing et al 1.
7- 3-10 Hinsley, DeCot Oil Co. 1.
2-13-21 Allen, Grote et al 1.
10-11-31 Hawkin, Johnson et al 1.
23-14-22 May, Dudney & Thompson 1.
30-14-20 Phillips, Ouachita Valley Oil Co. 1.
Rigs, 8; wells drilling, 43; total, 51.

ROCKY MOUNTAIN AREA

Summary of Field Operations

WYOMING

Dist.—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Big Muddy .	1	50	0	0	0	2	2
Salt Creek..	78	6,914	2	0	48	118	166
Lance Creek	0	0	0	0	1	2	3
Big Horn Basin	3	15	2	0	6	56	62
Lost Soldier.	4	150	2	1	1	34	35
Rock River District ..	3	0	3	0	1	19	20
Fremont Co..	1	50	0	0	4	19	20
Osage	2	10	1	0	5	11	16
Natrona Co..	1	0	1	0	0	17	17
Lincoln and Uintah	1	200	0	0	4	12	16
Baxter Basin	0	0	0	0	1	5	6
Miscellaneous	3	0	3	0	3	27	30
Total Aug.	97	7,389	14	1	74	332	406
Total July	64	5,295	6	3	88	341	429
Difference	33	2,094	8	2	14	9	23

MONTANA

Summary of Field Operations

Dist.—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Sunburst ...	63	5,647	18	1	13	42	55
Cat Creek and Miscel.	7	255	2	1	8	84	92
Total Aug.	70	5,902	20	2	21	126	147
Total July	46	5,515	10	3	25	133	158
Difference	24	387	9	1	4	7	11

COLORADO

Dist.—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Total Aug.	6	1,450	4	0	18	83	101
Total July	10	2,050	7	1	18	88	106
Difference	4	600	3	1	0	5	5

UTAH

Dist.—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Total Aug.	0	0	0	0	3	28	31
Total July	0	0	0	0	3	28	31
Difference	0	0	0	0	0	0	0

NEW MEXICO

Dist.—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Total Aug.	16	2,020	3	1	4	119	123
Total July	26	1,986	6	0	13	92	105
Difference.	10	35	3	1	9	27	18

WYOMING

Wells Drilling

8-33-76 Humphrey, Continental Oil 38.

Shut Down

2-33-76 Fenix, Continental Oil 4.
Rigs, 2; wells drilling, 2; total, 2.

SALT CREEK

Rigs

6-39-78 SE, Mountain & Gulf 8-A.
13-39-79 SE, Blackstone Salt Creek 4-F.
34-39-78 SW, Mammoth Oil 302.
34-40-78 NW, Mammoth Oil 205.
28-39-78 NW, Mammoth Oil 405.
28-39-78 NE, Mammoth Oil 406.
13-38-78 SW, Wyoming Teapot Oil 1.
16-39-78 NE, Nicolayser et al.
10-38-78 NW, Mammoth Oil 202.
19-40-79 NE, Norris Oil 18-A.
8-39-78 NE, Western State O. & G. 21-A.
2-39-79 SW, Sinclair Wyoming 11.
6-39-79 NE, Mt. & Gulf 29-A.
19-40-78 SW, Salt Creek Consolidated 36-A.
17-39-78 NW, Marine Oil M-2.
14-40-79 SE, Wyoming Asso. 18-A.
6-39-78 NE, Mountain & Gulf 13-A.
23-40-79 SW, Wyoming Asso. 21-A.
14-40-79 SE, Wyoming Asso. 4-A.
35-40-79 NW, Wyoming Asso. 3-A, 5-A.
23-40-79 NW, Wyoming Asso. 36-A.
35-40-79 NE, Midwest Oil 31-A.
23-40-79 SE, Midwest Oil 15-A.
31-39-78 SE, Teapot Dev. Co. 1.
22-40-79 SE, Wyoming Oil Fields 22-A.
26-40-79 NE, Wyoming Asso. 4-A.
23-40-79 SW, Wyoming Asso. 33-A, 34-A.
26-40-79 SE, Wyoming Asso. 19-A.
34-40-79 NW, Wyoming Asso. 19-A.
34-40-78 SE, Wyoming Asso. 9-A.
35-40-79 SE, Wyoming Asso. 16-A.
3-39-79 SE, Salt Creek Consolidated 36-A.
35-40-79 SE, Midwest Oil 31-A.
23-40-79 SE, Midwest Oil 1-A.
29-40-78 NW, Texas Production 6-A.
1-39-78 SE, Continental Oil 11-A.
19-40-78 Norris, Continental Oil N-11.
36-40-79 NW, Midwest & Wyoming Asso. 12-A.
29-40-78 SW, Continental Oil S-7.
19-40-78 NW, Utah Oil & Ref.
23-40-79 SW, Wyo. Oil Fields 18-A.
26-40-79 NW, Wyo. Asso. 33-A.
25-40-79 SW, Wyo. Asso. 19-A.
6-39-78 SE, Mountain & Gulf 8-A.
34-40-78 SW, Continental Oil 12-A.
5-39-78 NW, Western States 29-A.

Wells Drilling

26-40-79 SE, Wyoming Asso. 4-A.
31-40-78 SE, Salt Creek Cons. 16-A.
31-40-78 SW, Salt Creek Cons. 13-A.
5-39-78 NE, Western States O. & G. 31-A.
2-39-79 SW, Mutual Oil 4-I.S.
34-40-79 NW, Wyoming Oil Fields 34-X.
15-40-79 SE, Kasanning Oil 10.
30-40-79 SE, Wyoming Asso. 19-A.
24-40-79 NW, Wyoming Asso. 33-A.
26-40-79 NE, Wyoming Asso. 26-A.
26-40-79 NW, Wyoming Asso. 1-A.
33-40-79 SW, Wyoming Asso. 26-A.
19-40-78 SW, Midwest Oil 18-A, 22-A.
27-40-79 SE, Midwest Oil 3-A.
27-40-79 NE, Midwest Oil 34-A.
12-40-79 NW, Midwest-Wyoming Asso. 19-A.
14-40-79 SW, Wyoming Associated 36-A.
14-40-79 SW, Wyoming Associated 24-A.
30-40-78 SW, Wyoming Associated 1-A.
35-40-79 NW, Wyoming Associated 35-A.
25-40-79 SW, Wyoming Associated 31-L.
31-40-78 SE, Salt Creek Cons. 24-A, 1-A.
3-39-79 SE, Salt Creek Cons. 24-A.
1-39-79 NE, Midwest Oil 36-A.
30-40-78 NW, Utah Oil & Ref. 36-A.
17-39-78 SE, Marine Oil Co. M-9.
22-40-79 SW, Marine Oil 6.
25-40-79 SW, Wyoming Oil Fields 12-L.
34-40-79 NE, Wyoming Associated 33-A.
34-40-79 SE, Wyoming Associated 3-A.
23-40-79 SE, Wyoming Associated 19-L.
23-40-79 SW, Midwest Oil 15-A.
24-40-79 SW, Midwest Oil 36-A.
19-40-78 SW, Midwest Oil 12-A.
11-40-79 SE, Midwest Oil 29-A.
11-40-79 SW, Midwest Oil 26-A.
22-40-79 NE, Midwest Oil 24-A.
13-40-79 NW, Midwest & Wyo. Asso. 24-A.
30-40-78 NW, Utah Oil & Ref. 34-A.
30-40-78 SE, Prairie Oil & Gas 12.
29-40-78 NW, Texas Production 19-A.
32-40-78 SW, Continental Oil 24-A.
5-39-78 NW, Carter Oil D-12.
23-40-79 NW, Wyo. Oil Fields 23-A.
23-40-79 NE, Wyo. Asso. 36-A.
15-40-79 NE, Wyo. Asso. 33-A.
26-40-79 SE, Wyo. Asso. 36-L.
26-40-79 SW, Wyo. Asso. 2-A.
35-40-79 NW, Wyo. Asso. 8-A.
26-40-79 NW, Wyo. Asso. 18-A.
30-40-78 NW, Wyo. Asso. 33-A.
30-40-78 SW, Wyo. Asso. 3-A.
22-40-79 SE, Wyo. Asso. 24-A.
30-40-78 SW, Wyo. Asso. 4-A.
30-40-78 NW, Wyo. Asso. 16-A.
35-40-79 SE, Wyo. Asso. 3-A.
3-39-79 SE, Salt Creek Cons. 16-A.
3-39-79 NE, Salt Creek Cons. 21-A.
3-39-79 NE, Salt Creek Cons. 26-A.
13-40-79 NE, Mountain & Gulf 11-A.
13-40-79 NE, Mountain & Gulf 33-A.
13-40-79 NE, Mountain & Gulf 21-A.
27-40-79 SE, Midwest Oil 21-A.
19-40-78 SW, Midwest Oil 12-A.
26-40-79 SE, Midwest Oil 6-L.
35-40-79 NE, Midwest Oil 1-L.
27-40-79 SE, Midwest Oil 24-A.
35-40-79 NE, Midwest Oil 15-A.
35-40-79 NE, Midwest Oil 2-A.
14-40-79 NE, Midwest Oil 18-A.
23-40-79 NW, Midwest Oil 19-A.
25-40-79 SE, Midwest Oil 6-A.
26-40-79 SW, Midwest Oil 3-A.
26-40-79 SE, Midwest Oil 36-A.
35-40-79 NE, Midwest Oil 22-A.
25-40-79 NW, Midwest Oil 36-A.
22-40-79 NE, Midwest Oil 13-A.
36-40-79 SE, Midwest & Wyo. Asso. 6-A.
36-40-79 NW, Midwest & Wyo. Asso. 21-A, 27-A.
36-40-79 NE, Midwest & Wyo. Asso. 18-A.
36-40-79 NW, Midwest & Wyo. Asso. 12-L.
13-40-79 NW, Midwest & Wyo. Asso. 3-A.
36-40-79 NE, Midwest & Wyo. Asso. 19-A.
30-40-78 NW, Utah Oil & Ref. 15-A.
15-40-79 SE, Prairie Oil & Gas 11.
19-40-78 NW, Prairie Oil & Gas F-6.
19-40-78 SE, Texas Prod. Co. 36-A.
32-40-78 SE, Texas Prod. Co. 32-A, 29-A.
29-40-78 NW, Texas Prod. Co. 7-A.
30-40-78 NE, Continental Oil B-19.
24-39-79 NE, Continental Oil 22-AS.
2-39-79 SW, Continental Oil 1-A.
19-40-78 SE, Continental Oil 11-N.
32-40-78 SW, Continental Oil B-18.
12-40-79 NE, Empire State 18-A.
32-40-78 SE, M. B. Schuster 18-A.
1-39-79 SE, Continental Oil 1-A.
33-40-79 Teton Petro. 2.

Shut Down

19-39-78 SE, Texas Production D-1.
10-40-79 SE, Empire State Oil 25-A.
28-39-78 NE, Mammoth Oil 101.
29-39-78 NE, Mammoth Oil 108.
28-39-78 NE, Mammoth Oil 304.
28-39-78 SW, Mammoth Oil 302.
28-39-78 NW, Mammoth Oil 205.
4-38-78 NW, Mammoth Oil 101.
23-39-78 NE, Evans Oil 1.
29-39-78 NW, Omaha Lusk Oil 1.
2-38-78 NE, Teapot Dome Synd. 34-A.
6-39-78 NE, Mountain & Gulf 34-A.
34-39-78 SW, Mutual Oil 35-A.
28-40-79 SW, Jupiter Oil 27-A.
24-39-79 NE, Mutual Oil 22-AS.
19-39-78 NW, Kinney Coastal 18-A.
7-39-78 SE, Continental Oil 1-DD.
Rigs, 48; wells drilling, 118; total, 166.

LANCE CREEK

Rigs

35-36-65 Leo 16, Ohio Oil 4.

Shut Down

18-35-65 NE, Union Oil 1.
3-35-65 Belle Cattle Co., Mutual Oil.
Rigs, 1; wells drilling, 2; total, 3

BIG HORN BASIN

Rigs

23-44-95 Flavin, Ohio Oil 1.
5-47-90 Hetzler, Ohio Oil 1.
22-56- Howell, Occidental Oil & Gas.
32-47-100 NE, Prairie Oil & Gas 1.
29-56-97 SW, Utah Southern Oil 1.
19-54-93 SW, Crystal Creek Synd.

Wells Drilling

2-44-96 NW, F. A. McPherson.
7-54-93 Garry Oil & Development Co.
31-43-90 SW, Utah Oil & Ref. 3.
45-49-91 Shaffer & Tilley.
18-46-98 Washakie, Ohio Oil 4.
28-44-93 West Zimmerman Butte Oil.
19-46-98 Meeteese, Midwest Ref. 16-A.
8-81-100 Union Oil Co.
11-49-102 Omar Oil & Gas Co.
19-26-93 Ridgley, Midwest Ref. Co. 19-A.
31-56-96 California Co., 1.
34-42-91 Lake Creek, Union Oil Co.
20-53-101 NE, Washington Oil & Gas.
5-54-93 Royal Oil & Ref. Co.
1-49-102 T. C. Clark et al.
23-44-95 NE, Utah Oil & Ref. Co.
21-53-101 Cutterman et al.
14-48-102 Big Horn Dev. Co.
31-48-90 Tensleep, Ohio Oil 3.
29-56-97 Utah Consolidated Oil.
20-53-101 Taylor Brothers.
7-46-98 Washakie, Ohio Oil 2.
10-55-97 Lot 42, Standard of California.
25-43-90 SW, Utah Oil & Ref. Co.
20-53-100 NE, Pittsburgh Southwestern 1.
33-56-97 Cross Gas Co., Ohio Oil 9.
29-46-98 Mill Iron, Ohio Oil 68, 70.
17-46-98 Washakie, Ohio Oil 1.
36-58-100 Tondale, Local Oil Co. 1.

Shut Down

11-49-102 T. A. Stancliff.
35-57-97 NE, American Indian Oil Co.
4-50-100 Florence Oil Co.
3-55-97 Griffin, Allen Oil Co.
31-48-99 SW, Midwest Ref. Co. 18.
31-48-99 SW, Midwest Ref. Co. 1-T.
28-44-93 NE, F. A. McPherson.
29-56-97 NE, Utah Southern Oil.
2-47-100 NE, Midwest Ref. Co.
34-56-97 Linton, Allen Oil Co.
31-45-99 W, Kasanning Oil Co.
29-40-91 SW, Olympus Oil Co.
17-49-91 Frontier Oil & Gas.
27-46-98 Rankin, Dickie Oil Co.
8-46-98 Grass Creek Production.
12-45-97 Midwest Refining Co.
3-56-97 Beck Petroleum Co.
16-47-100 Big Horn Development Co.
17-48-98 Tunador Oil Co.
30-56-97 Producers & Refiners.
19-51-92 Bruce Holding Co.
34-48-93 C. D. Markham et al.
2-56-97 Jones, Allen Oil Co.
12-45-97 On Time, Midwest Ref. 1.
10-54-95 SE, Westland Oil Co. 1.
35-55-95 Westland Oil Co. 1.
Rigs, 6; wells drilling, 56; total, 62.

LOST SOLDIER

Rigs

6-23-88 SE, Producers & Ref. 1.

Wells Drilling

14-20-88 SE, Lake Valley Oil Co.
16-25-86 General Petroleum Corp.
22-26-90 NW, Texas Production Co.
20-21-80 NW, Producers & Refiners 1.
12-26-90 Texas Production Co.
26-20-88 Hatfield No. 2 Oil Co.
36-26-90 Producers & Refiners 3.
3-26-90 Prairie Oil & Gas 58.
8-25-86 NE, General Petroleum 2.
25-26-87 SE, Producers & Refiners 16.
11-26-90 NW, Producers & Refiners 7.
11-26-90 NE, Producers & Refiners 68.
7-26-89 SW, Producers & Refiners 3.
10-26-90 SE, Prairie Oil & Gas 61-A.
29-26-87 Producers & Refiners 2.
6-23-88 NW, Prairie Oil & Gas 1.
3-25-88 NW, Producers & Refiners 3.
19-25-88 Stoddard, Ohio Oil 1.
1-26-90 Producers & Refiners 6.

Shut Down

3-26-90 Sand Hills Oil 5.
9-26-86 Govt. land, Columbia Pet. Co.
4-26-90 SE, Sand Hills Oil 4.
23-26-87 SE, Marvin Oil Co.
28-26-88 Govt. land, Columbia Pet. Co.
9-26-90 SE, Major Oil Co.
34-27-90 SW, Annabell Wyoming Oil.
35-25-88 M. M. Armstrong.
24-26-87 SW, Producers & Refiners 20.
28-26-86 Portland Wyoming 1, 2.
21-26-86 Portland Wyoming 3.
25-26-87 SE, Producers & Refiners 16, 3.
26-25-89 NW, E. R. Goode.
Rigs, 1; wells drilling, 34; total, 35.

ROCK RIVER DISTRICT
Rigs
34-20-78 M. L. Lundy 1.
Wells Drilling
21-19-79 SW, Prairie Dog Oil & Gas Co.
1-18-78 Dutton Creek, Midwest Ref. Co.
25-22-78 Fotte Creek, Kasoming Oil Co.
14-16-78 Govt. land, G. A. Briggs.
19-18-77 U. P.-Ohio Oil Co.
25-21-79 SE, Southwestern Pet. Co.
26-16-77 Rex Dome Oil Co.
23-21-79 SE, Southwestern Pet. 1.
11-19-78 H. & C., Ohio Oil 5, 6.
2-19-78 H. & C., Ohio Oil 10.
18-22-78 SW, Texas Prod. Co. 1.
13-17-76 NW, Texas Prod. Co. 1.
8-17-77 SE, Texas Prod. Co. 1.
Shut Down
36-21-79 NW, Southwestern Pet. Co.
34-33-79 Central Pipe Line Co.
10-18-77 Carbon County Oil Co.
12-20-77 McLaughlin et al.
25-16-77 Rex Dome Oil Co. 1.
Rigs, 1; wells drilling, 19; total, 20.

FREMONT COUNTY
Rigs
10-32-95 Producers & Refiners.
15-32-95 Texas Prod. Co. 1.
18-28-92 Producers & Refiners 1.
13-28-92 Producers & Refiners 2.
Wells Drilling
24-33-90 Seal Oil Association.
36-37-94 Wyoming Syndicate.
23-32-95 Producers & Refiners 1.
5-31-98 Martin F. Fold et al.
26- 5- 2 Connely Oil & Gas.
9-32-95 NE, Producers & Refiners 2.
15-34-90 Ward Oil Co.
21- 1- 1 McDonald et al.
24-32-90 Meyers Petroleum Co.
34-32-90 Meyers Petroleum Co.
14-32-95 NW, Riverton Pet. Co.
7-27-95 Van, Wyo., Prarie Oil & Gas 1.
19-27-95 Brimmer, Prarie Oil & Gas 2.
7-27-95 Prairie Oil & Gas 2.
13-28-93 Spencer et al 1.
15- 6- 2 SW, Union Oil Co. 11.
10-28-92 SE, Union Oil Co. 1.
Shut Down
19-27-18 Prairie Oil & Gas Co.
6- 6- 2 SW, Union of California 2.
10-36-94 NW, Myrin Oil Co.
21- 1- 1 Bridges Oil Co.
18-27-95 Sage Creek Pet. Co.
29-27-95 Fremont Pet. Co.
15-32-95 NE, Producers & Refiners 3
22- 6- 2 Miles City Oil Corp.
3- 1- 2 NE, Teton Pet. Co. 1.
4-31-98 Derby Dome Wyoming 1.
4-31-98 Burnside Oil Co.
15- 5- 2 NW, Mack Oil Co. 1.
Dallas Field, Derby Dome Wyoming.
Rigs, 4; wells drilling, 29; total, 33.

OSAGE
Rigs
31-27-63 L. B. Hanson.
31-27-63 West Royalty Co.
Fawcett Ranch, Manlove et al.
31-26-73 Clark et al.
17-26-63 La Fleiche Oil Co.
Wells Drilling
10-25-61 Lenhart & Briggs.
17-27-63 Wyoming Oil & Gas.
18-26-64 Fred Gravestead.
5-26-63 Fletcher Bros.
31-26-63 Tom Don Oil Co.
17-26-63 La Fleiche Oil Co.
8-28-63 John O'Brien.
36-26-63 John O'Brien.
Shut Down
11-25-65 Frederick Oil & Gas Co.
6-26-63 Osage Trust Co.
8-26-63 Griffith Oil Co.
Rigs, 5; wells drilling, 11; total, 16.

NATRONA COUNTY
Wells Drilling
23-34-82 Bradford Wyoming.
15-34-87 NE, Mutual Oil Co.
11-32-92 New York Oil Co.
10-36-85 New York Oil Co.
9-35-85 New York Oil Co.
15-32-83 Danaher Syndicate.
5-29-80 NW, Vernon Oil Co.
31-40-80 NW, Comet Oil Co.
25-36-85 Midwest Refining Co.
23-33-70 Horseshoe Syndicate.
4-33-87 SW, Continental Oil 1.
23-33-79 Casper Oil & Gas Synd.
13-29-82 Chase, Ohio Oil 1.
3-33-83 NE, Fargo Western Oil 26, 24.
Shut Down
9-41-80 Newcome et al.
20-37-86 NW, John Wyland et al.
Rigs, 0; wells drilling, 17; total, 17.

LINCOLN AND UINTAH COUNTIES
Rigs
3-16-113 Wyoming Reserve Oil Co.
31-28-113 Tip Top Syndicate.
12-29-113 Clinton Oil Syndicate.
1-28-114 Cretacous Oil Co. 1.
Wells Drilling
32-19-116 NW, Conger et al.
Near Afton, Great Western Oil.
9-26-13 Transcontinental Oil Co.
22-21-113 Three States Oil Co.
3-26-113 Superior Oil Co.
14-21-117 Pacific Properties Co.
15-21-117 Pacific Properties Co.
17-27-113 Elkhorn, Western Slope Oil 1.
6-15-118 Garrison et al 1.
12-11-118 Vulcan Oil Co. 1.
6-15-118 Olson & Zimmerman.
Shut Down
7-28-114 Charles Lackey et al.
Rigs, 4; wells drilling, 12; total, 16.

BAXTER BASN
Rigs
27-17-104 Montical Oil Co.
Shut Down
8-16-104 SE, Montical Oil Co.
26-17-104 SE, Associated Oil Co.
24-17-104 SE, Montical Oil Co.
30-18-104 Midwest Ref. Co. 6-AX.
23-17-104 SE, Associated Oil Co. 1.
Rigs, 1; wells drilling, 5; total, 6.

MISCELLANEOUS
Rigs
32-44-65 SW, Sunset Oil Co.
Baggs Dome, M. M. Armstrong.
26-48-64 T. S. Hogan et al.
Wells Drilling
29-49-64 Osage Oil Trust.
1-44-61 NE, Gose Syndicate.
24-26-82 NW, Foreman et al.
31-37-87 NW, Atlas Oil Co.
6-28-62 Jay Em., Foreman et al.
12-26-67 Platte Valley Oil Co.
23-27-93 Associated Oil Co
28-42-78 Seattle Syndicate.
Guernsey district, Illinois Synd.
24-48-82 McL, Carter Oil Co.
28-42-79 Montana Giant Oil Co.
Buffalo district, Kinney Coastal Oil.
17-48-82 Hess, Carter Oil Co. 2.
11-40-80 Mariand Oil Co.
32-19-110 Johnson Land Co.
28-47-65 NE, Gose Syndicate.
15-33-68 York, Schyler et al 1.
17-46-82 Steel Ck., Tarront Syndicate 2.
15-33-68 SW, Schuyler et al 1.
1-33-65 Manville O. & G. 1.
17-48-62 Rider, Carter Oil 1.
Shut Down
31-50-69 Rosset Oil & Gas Co.
30-29-68 Nebraska Oil Co.
16-48-82 Belt, Carter Oil Co.
17-48-82 Carter Oil Co.
18-39-68 Glendo Oil & Gas.
30-32-74 NW, Casper Syndicate.
Rigs, 3; wells drilling, 27; total ,30.

MONTANA
CAT CREEK
Rigs
12-15-28 NE, Shaffer Oil Co.
Wells Drilling
11-15-29 Cooke-Coolidge-Ide 1.
32-14-28 Winnet Pacific Oil Co.
1-15-29 Custer Oil Co.
9-15-29 NE, Frantz Oil Co.
7-15-29 NW, T. S. Hogan.
14-15-29 Green-Frantz Oil Corp.
13-15-29 Wiedschuts Mid-Northern 10.
14-15-29 Clayton, Frantz Corp. 15.
36-16-28 NE, Hardrock Oil Co. 1.
12-15-28 NE, California Co. 7.
2-15-28 Ryon, California Co. 1.
31-15-30 Master, Kissling Oil Co. 1.
12-15-29 Catlett, Mid-Northern Oil 9.
Shut Down
10-15-29 Fifty-Six Petroleum Co.
15-15-30 Swartz et al.
28-16-28 Republic Peerless 1.
9-15-27 Peerles Oil Co.
Rigs, 3; wells drilling, 17; total, 18.

KEVIN-SUNBURST
Rigs
4732-4 Swears, Bearmuey 1.
20-34-2 McBride, Canadian American Oil.
25-36-2 Keskin, Troy Island Oil Co.
17-35-1 Potlack Oil Co. 2.
30-35-1 Standard, Wallace Oil Co. 2.
11-35-2 Stockmens Bank, Ohio Oil Co.
20-35-2 Whitman, Homestake Exploration.
28-35-2 Lorenson, California Co. 2.
30-35-2 Broadwell, Hacla Oil 1.
3-35-2 Stevenson, Ohio Oil 2.
10-35-2 Bruins, Ohio Oil 2.
14-35-2 Reeg, Ohio Oil 2.
30-35-1 Manghan, Ohio Oil 3.
Wells Drilling
9-32-2 Suhr, Sunburst Prod. Co.
33-34-2 NE, Frazer Oil Co. 2.
8-34-2 Pittsburgh Montana Oil.
32- 6-2 Roudsley, Sunburst O. & G.
22-35-2 Newman, California Co.
24-33-1 Shelby Syndicate.
28-37-2 McAlpin, Spartan Oil 1.
30-35-2 Holter, Sunburst Prod. Co.
7-34-1 Harte, Russell Oil et al.
18-34-1 Skinner, Creel et al.
32-35-1 Uutnam, Keystone Oil Co.
29-34-1 Bailey, Flood Watson et al.
32-36-2 Farring, Neil Syndicate.
27-35-2 Davis, Maharg Oil 1.
35-35-3 Roseth, R. Van Meer 2.
17-34-2 McGleen, Valier Drilling Co.
33-36-2 Rounsley, Ohio Oil 3.
15-35-2 Kenney, Ohio Oil.
33-35-2 Norem, Ohio Oil 7.
21-34-1 Stockmens Bank, Potlatch Oil 1.
4-34-2 Moort, Queen City Oil 14.
31-35-1 Allen, Big West Oil 1.
32-35-2 Holloran, Homestake Exploration 4.
25-35-2 McKee, California Co. 1.
30-35-1 State, Tri-State Oil 3.
26-35-2 Able, O'Neil Brothers 1.
34-35-2 Lashbough, Crumley McKnight 3.
30-35-1 Anderson, Ferdig Hughes 10.
9-34-2 Falck, O'Hare et al.
14-35-2 Hagerty, Sunburst O. & G. 3.
35-35-2 Able, Sunburst O. & G. 1.
35-35-2 Byrne, Beardslee et al 2.
22-35-2 SW Lorenson et al 1.
31-35-1 Caine, Adams et al 1.
7-34-2 NW, Western States Oil 1.
27-35-2 SE, West & Wilson.
Shut Down
28-35-1 Shelby Federal-Miller.
23-33-1 Webb, Shelby Oil & Gas.
12-34-1 Peterson, Lucky Forty Oil.
13-33-2 Campbell, Campbell Synd. 5.
16-34-2 NW, Rainbow Oil Co.
1-34-2 NE, Sunburst Oil & Gas.
Rigs, 13; wells drilling, 42; total, 55.

MISCELLANEOUS
Rigs
Porcupine Dome, Stellar Oil & Gas.
24-14-15 Fullerton Oil & Gas.
12-10-32 Hibbard Oil Co.
4-28-30 Mid-Northern Oil.
5- 1-4 Absaroka Oil Dev. Co.
Losch Dome, Montana Belle Oil 1.
34-23-2 Rainbow Syndicate.
Wells Drilling
34-22-1 X, Great Northern Mutual Oil.
33-19-7 SW, Hager Stephenson Oil.
22-2-25 SE, Lake Basin Oil Co.
28-8-21 Klinefelter, Absaroka Oil Dev.
24-14-4 Coal Creek Oil Co.
13-18-4 Coal Ridge, Montana O. & G.
5- 3-16 Montana Portland Oil.
5- 4-23 NE, Hoosier Co.
33-16-28 H. H. Swartz, Jr.
9-31-19 California Co.
14-14-25 Flatwillow, A. M. Z. Synd.
32-25-30 Butler Oil & Gas.
24-20-12 Continental Prod.
17- 3-19 Snyder, Mid-Northern Oil.
4-27-26 California Co.
20-24- 1 C. A. McDonald et al.
16-15-25 SW, Great Northern Mutual 1.
26-11-24 SW, Lincoln Oil 1.
19- 1-31 Allen Oil 1.
24- 5- 8 SW, Potter Basin Oil & Gas.
18-22-3 SE, Elkhorn O. & G. 1.
10-18-2 NE, Moscow Idaho Oil.
28-30-4 NW, West Virginia Oil.
27-36-12 SW, Mountain Chief 2.
9-12-14 Wilder, Glenholm Oil 2.
24-14-25 NW, Henry Seibert 1.
25-15-25 SW, Winnett Syndicate.
25- 1-21 NW, Nendigate Ext., Inc.
5- 1-24 NW, Absoroka Oil 1.
14-31- 1 NW, Dunkirk Oil 1.
3-37 -3 Robinson et al 1.
Benton Lake, Browning et al.
McDonald Creek, Wilson Fisher 2.
32-36- 2 Well Syndicate.
24- 1-21 SW, Record Petroleum Co.
26- 1-21 NE, Barnsdale Foster 1.
20- 1-25 Stebbins, California Montana 1.
7- 8-57 NE, California Montana 1.
25-16-25 Gordon Campbell 1.
Shut Down
32- 4-16 SW, Consolidated Oil & Gas.
5-35-21 NE, F. G., Oakland.
27- 3-24 SE, Murray Brothers 2.
5-20-24 NE, American Indian Oil.
36- 1-12 State, Springdale Oil Synd.
20-25- 5 Larson, Edwards et al.
2-26- 2 Jones, W. M. Edwards.
18- 3-23 SW, Securities Production 4.
5-20-24 NE, American Indian Oil.
35-32-32 SW Bowdin Oil & Gas.
7-27- 7 NW, Circle Oil Co.
26-10 39 Stellar Oil & Gas.
32-30- 2 Devzer, Drake Oil Co.
31-14-28 Black Hawk Oil.
22- 2-25 McMennimen et al.
18- 6-24 Mennemyer & Newman.
3-12-25 Minnesota Flatwillow.
6-13-14 Fulton Oil Co.
26-14-20 Jackson Oil Co.
30-15-26 Winnet Shallow Oil Synd.
7-27-1 Tri-City Oil.
Devils Basin, Alberta Block Coal
25- 2-27 Gladys Belle Oil.
Devils Basin, Montana Central Oil.
12-11-13 Kalispell Syndicate.
6- 5-25 Grey Eagle Oil.
18-32- 4 Beck Petroleum Co.
2-28- 2 NE, Dry Fork Oil 1.
Rigs, 7; wells drilling, 67; total, 74.

COLORADO
Rigs
10- 3-44 Yuma Valley Oil Co.
1- 8-68 Morrell, Petroleum Prod. Corp.
17- 8-68 Fort Collins Chief Oil.
29-10-68 American Petroleum Co.
12-38-70 Green Mountain Pet.
31- 9-68 Midway Oil & Gas.
12- 2-70 Mullin Synd.
27- 3-20 Rainbow Oil Dev. Co.
26- 9-69 Benson & Mitchell 1.
30- 9-68 NW, Farrell et al 1.
8-9-68 NE, Union Junior Oil Co.
3-35 58 Las Animas Synd. 3.
10- 3-44 SW, Hessick Drlg. Co. 1.
4-21-69 Continental Oil 1.
30-2-102 Texas Prod., Inc. 1.
36-10-69 State, Senaca Oil Co. 1.
19- 6-86 Bond No. 1, Texas Prod. 1.
Rangeley Field, Texas Prod. 1.
Wells Drilling
30- 8-68 Blunck, Union Oil of California.
34- 8-69 Evans, Union Oil of California.
30- 8.68 Water Co., Union of California.
32-10-68 Hess, Union Oil of California.
31-10-68 Buckeye, Union Oil of California.
36-10-68 State Union Oil of California.
31- 5-98 Morgan, Union Oil of California.
6- 7-68 Lindemeir, Victory Oil Co.
4-6-68 Webster, Douglass Oil Co.
10-24-69 Panuco Exploration.
28- 3-64 Watkins, Miller Oil Co.
18-20-46 Ne-No-She Oil Co.
18- 2-68 Texas Production Co. 2.
13- 1-46 Yuma 2, Hessick Drilling Co.
23- 6-69 Rulkvetter, Wellington Oil Co.
33- 8-68 Chandler, Brendal & Ache.
34- 2-69 Johnson, Roland Oil Co.
18- 2-68 Texas Production Co. 2.
33- 6-91 Weyland, Texas Production Co.
8- 9-69 Warren, Union of Colorado.
24- 4-92 French, Midwest Ref. Co.
32- 8-68 Graham, Fort Collins Pet. Co.
19- 9-68 Harvard, Great Northern Oil, Inc
17- 5-64 Hog Ranch, Roland Oil Co.
21- 4-92 Loyd, Midwest Ref. Co. 4.
3- 2-44 Wright, Wrayfield Oil Corp.
19- 5-69 Alps, Gateway Oil Co.
5- 6-68 Majestic Oil Co.
19-16-48 Schuls, California Co.
11- 1-44 Hildrith, Hessick Drilling Co.
4-32-68 Tulsa Oil Leasing Co.
9-12-62 Ullium, Roland Oil Co.
34-8-68 Ruff, Victory Oil Co.
23- 9-69 Waverly, Consolidated Oil Co.
19-28-68 Panuco Exploration.
28- 8-68 Webster, Associated Oil Co.
24- 9-69 Hanna, Wellington Oil 1.
32-10-68 SE, Imperial Oil Co.
17- 8-68 NW, Carter Oil Co.
4.45-16 NW, Gilmore Oil Co. 1.
3-32-12 Leidecker Pet. Corp.
13-15-61 Panuco Exploration 1.
5-1-70 Eberharter, Boulder Oil Co. 1.
36- 8-69 NE, Atlantic Pet. 1.
25- 8-69 NE, American Pet. Corp. 1.
6- 7-68 NE, Bonner Oil 1.
1- 8-69 SE, Consolidated Oil Fields Co. 1.
1- 9-69 SE, Union Oil Co. of California 1.
8- 9-68 NW, Great Northern Oil 1.
23- 9-69 SE, Consolidated Oil Fields Co. 1.
25- 1-69 Everhard, Boulder Oil Corp.
30- 4-68 NW, Panuco Exploration 1.
21-20-69 SW, Continental Oil.
30-27-45 NW, Lamar Oil Co. 1.
10- 8-68 Larson, Union Oil of California 1.
7- 9-69 Dumont, Union Oil of California 1.
31- 2-96 NW, White River Dev. Co. 1.
10- 4-91 Knowlton, Texas Trans. 2.
36-7-103 SW, Midwest Refining 1.
14- 1-66 Smith, Better Oil Co. 1.
30-10-68 Leroy, Wyoming-Illinois Pet. 1.
5- 7-68 Brown, Fifty-Four Oil Co.
22- 4-92 French, Midwest Ref. 2.
22- 4-92 Carter, Midwest Ref. 2.
27- 4-92 Rink, Midwest Ref. 1.
8-8-102 Smith, Sun Oil Co. 1.
5-8-103 Gypsy Oil Co. 1.
Shut Down
1-20-63 Baxter, Salida Oil & Ref. Co.
5- 1-43 Holland, Hessick Drilling Co.
13- 8-68 Hoff, Centennial & Sunset.
3-35-58 Las Animas Syndicate.
8- 9-68 Ketterman, Colorado Oil Prod. Co.
28- 5-91 Freeman, Texas Prodduction Co.
33- 5-91 Hamilton, Texas Production Co.
36- 5-99 State, Producers & Refiners.
25-24-61 SW, Utah Southern Oil 1.
15-21-65 Union Oil Co. of Colorado.
34-17-70 Mutual Oil & Dev. 1.
20- 2-46 Herman, General Pet. 1.
3-32-12 NW, Leidecker et al 3.
28-28-52 Associated Oil of Colorado 1.
28- 2-70 Gebrung, Sand Hills Oil 1.
23-31-65 Colorado Oil Co. 1.
Rigs, 18; wells drilling, 83; total, 101.

UTAH
Rigs
18-23-21 Metropole Oil Co.
4-22-19 Crescent Dome Petroleum 1.
25-21-16 Culbertson, Marland Oil Co. 1.
Wells Drilling
19-22-21 Utah Oil & Refining.
23-44-95 Mountain States Pet. Co.
35-43-90 Utah Oil & Ref. Co. 2.
31-43-10 Utah Oil & Ref. Co. 3.
6-27-21 Shaffer, Midwest Ref. Co. 1.
Roselle Dist., Lakeside Oil Co.
16- 2- 5 State, Western Empire Oil.
32-42-17 Monroe Oil Co.
Diamond Fork, Gustaven Oil Co.
31-32-18 Union Oil of Utah.
27-14-19 Ciockner, Utah Southern Oil.
23- 5-22 Utah Oil & Ref.
4-18-28 New York State Oil Co.
7-21-19 SW, Sandberg Pet. Co. 1.
22- 3-24 SW, Producers & Refiners.
Grand County, Raddats Synd. 1.
Grand County, Francisco Pet. 1.
Shut Down
6-14-18 San Juan Oil & Dev. Co.
23-42-17 Monumental Oil.
12-19-13 Utah Oil & Ref. Co.
17- 4- 6 Ute Pet. & Utah Southern.
13- 4- 9 Castle Dale Oil Co.
27-16- 4 Producers Oil Co.
Lakeside Dome, W. R. Holmes.
Diamond Fork, Franko Utah Oil
25-13-13 Utah Central Oil Co.
34-25-21 NW, Big Six Oil Co. 1.
4-22-10 SE, Crescent Eagle Oil 1.
Rigs, 3; wells drilling, 28; total, 31.

NEW MEXICO
Rigs
36-12-23 W. H. Graham.
17-18-28 SE, Williams Oil Co. 2.
17-18-28 NW, E. G. Hurst 1.
29-17-18 T. S. Hogan 1.
Wells Drilling
13-29-11 Montezuma Syndicate.
11-29-21 Arkansas Fuel Co.
30- 3- 9 NE, Arkansas Fuel Co.
4-20-27 Olson, M. W. Miller.
34-19-28 T. S. Hogan.
15-29-11 Bloomfield Oil & Gas Co. 6.
15-12-23 Zeppenfield Co.
9-20-10 Lixi Oil Co.
31-32-13 Four State Oil Co.
15-23-24 California Co.
3-13-29 Bell, Mariand Oil Co. 1.
23-31-18 NW, Union Oil 1.
4-18-28 SW, Dancigar Brothers 3.
11-16-27 SE, Keves et al.
11-20-29 Rawson, William Dooley.
18-22-27 SE, Blue Bird Oil Co. 1.
3-22-26 NE, Blue Bird Oil Co. 2.
14-15-17 NE, Arkansas Fuel Co. 1.
2-29-10 SE, Continental Oil 11.
23-20-28 SE,Midwest Ref. Co. 1.
16-18-28 SW, Compton Brothers 2.
9-18-28 NE, Sandberg Petroleum 2.
8-18-28 SE, Los Angeles Oil Co. 1.
17-18-28 SE,Williams Oil 3.
16- 8-27 NW,Colorado Gas & Fuel 1.
24- 8-23 SE, Lewis et al 1.
30- 4- 9 NE, Red Feather Oil 1.
16- 1-27 Fort Sumner Oil Co. 1.
2- 5-25 NW, Spaulding Dome Synd.
16-13- 9 Meistead 2.
30-14- 9 NE, Union United Oil 1.
8-32- 1 Albuquerque Oil Co. 1.
3-13-15 SW, Santa Fe Oil Co. 1.
8- 6- 1 NW, D. Chaves Pet. 1.
2- 3- 8 NW, Mitchell & Son 1.
8- 2-14 Nimmons et al 1.
29-18-28 NE, Illinois Production 15, 19.
28-18-28 NE, Illinois Production 17,18.
32-18-28 NE, Illinois Production 20.
18-17-28 SE, Bobb et al.
33-18-28 State, Snowden-McSweeney 2.
36-20-30 Keyes et al.
18-18-28 SW, Sandberg Petroleum 1.
1-18-27 SE, Moneta Oil Co. 1.
33-18-29 NE, Bailey & Craigin 1.
27-16-28 NE, Braden Oil Co.
4-18-28 NE, Carter & Dougherty.
5-18-28 Bile, Workman et al.
36-11-27 SW, Buffalo Roswell.
24-10-28 Hagerman, California Co. 1.
25-24- 1 Continental Oil 2.
31- 3-15 NW, Wyo-Colorado Co. 1.
27-10-24 E. A. Rose.
27-11-34 J. D. Ward.
14-16-32 Cass-Elliott.
33-11-35 Tilton & Cross.
18-25-35 Holmes & Huey.
20-29-11 NE, West Coast Gasoline Co.
16-29-11 SE, C. S. Ringle.
34-29-11 C. S. Ringle.
6-29- 9 Detroit Oil Corp.
1-20-27 McCullough, Ohio Oil 1.
24-21-26 Tracy, Ohio Oil 1.
28-18-28 Toomey, Ohio Oil 2, 3, 4.
4-18-28 Dougherty, Ohio Oil 1.
31-19-28 Pruitt, Ohio Oil 1.
1-20-28 Ryso, Ohio Oil 1.
21-17-28 Johnson, Ohio Oil 1.
4-18-28 New State, Ohio Oil 3.
5-18-28 New State, Ohio Oil 1.
29-18-28 Gilliland, Ohio Oil 2.
17-18-28,C. J. & W., Ohio Oil 2.
20-18-28 NW, Illinois Prod. Co. 16.
32-18-28 NE, Illinois Prod. Co. 21.
21-18-28 SE, Illinois Prod. Co. 22.
8-20-18 Reiff, California Co. 1.
18-17-28 SE, Bobb et al 3.
28-18-28 NW, Maljamar Oil 7, 8.
35-18-28 State, Chessimon et al.
17-18-28 Cummings, Danciger O. & R. 2.
18-18-28 Ragsdale, Danciger O. & R. 1.
33-18-28 NW, Snowden & McSweeney 2.
4-21-30 SW, Van Cleve & Kronen 2, 3.
17-18-28 SW, Texas Prod. Co. 2.
5-18-28 SW, Texas Prod. Co. 2.
31-17-29 SW, Ramage et al 1.
4-19-28 NW, McMose Oil Co. 1.
17-18-28 State, Danciger et al 1.
9-10-26 SW, Danciger et al 1.
9-13-34 McGee, Olean Oil Co. 1.
24-10-27 NW, R. C. Christman 1.
23-18-11 Pan-Mex Dumas 1.
23-17-29 New Mexico Oil 1.
26-18-18 New Mexico Oils.
25- 7- 2 Swisher & Wallace 1.
12-29-13 SW, Shiprock Oil Co.
24-31-15 W. R. Childers.
9-30- 9 Rainbow Oil Co. 2.
32-29-19 Navajo Petroleum 1.
3-27-17 SW, Continental Oil 2.
Shut Down
28-18-27 State, Oscar Howard.
25-39-12 Hallet et al.
24-29-11 Hubbel & Hall.
21-30-11 Home Gas Co. 1.
2-19-26 Peckenbough, Eureka Oil Co. 1.
1- 2-32 NE, Gurley Oil 1.
24-21-11 SE, Angelus Mining Assn.
21-14-15 SE, Blackstone Champion 1.
30-13-10 SW, Wood et al.
Tract No., Rainbow Oil Co. 1.
6-29- 9 Detroit Oil Corp.
10-29-24 NW, Eureka Oil Co.
19-20-30 NE, W. C. Wells & Son.
Rigs, 4; wells drilling, 119; total, 123.

WYOMING COMPLETIONS

8-33-76	Crary, Texas Prod. Co. 32	50
35-40-79	SW, Midwest Oil 3-A	45
22-40-79	SE, Widwest Oil 13-A	50
26-40-79	SE, Midwest Oil 18-A	45
26-40-79	SE, Midwest Oil 12-A	50
19-40-78	SW, Midwest Oil 25-A	75
3-39-79	SE, Salt Creek Cons. 11-A	50
23-40-79	NW, Wyoming Oil Fields 15-A	40
24-40-79	SW, Wyoming Oil Fields 31-A	35
23-40-79	SW, Wyoming Oil Fields 8-A.	40
30-40-78	SE, Wyoming Associated 9-A.	80

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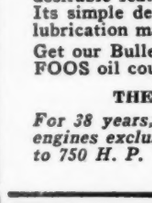

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23-40-79 SW, Wyoming Associated 31-A 40
6-39-78 NW, Mountain & Gulf 31-A. 35
24-40-79 SW, Wyoming Oil Fields 33-A 50
23-40-79 SE, Wyoming Oil Fields 8-A. 40
25-40-79 NW, Wyoming Oil Fields 1-A. 75
23-40-79 SE, Wyoming Oil Fields 7-A. 40
23-40-79 NW, Midwest Oil 18-A..... 50
35-40-79 SW, Midwest Oil 18-A..... 50
2-39-79 NW, Midwest Oil 36-A..... 45
30-40-78 NW, Wyoming Associated 19-A 50
25-40-79 SW, Wyoming Associated 22-A 50
19-40-78 NW, Wyoming Associated 20. 100
3-39-79 SE, Salt Creek Cons. 1-A.... 75
3-39-79 SE, Salt Creek Cons. 21-A.... 60
8-39-78 Prior, Carter Oil 16 75
2-39-79 SW, Continental Oil 19-A.... 70
18-40-78 NW, Prairie Oil & Gas 4..... 70
19-40-78 NW, E. T. Williams 17-A.... 140
27-40-79 NE, Midwest Oil 24-A 35
25-40-79 NE, Midwest & Wyo. Asso. 6-A 40
24-40-79 SW, Wyoming Oil Fields 31-A 575
17-39-78 NW, Western States O. & L. 13-X 25
22-40-79 SE, Wyoming Oil Fields 19-A 40
35-40-79 NW, Wyoming Asso. 31-A.... 50
14-40-79 NW, Wyoming Asso. 8-A..... 85
30-40-78 SE, Wyoming Asso. 6-A..... 75
24-40-79 NW, Wyoming Asso. 31-A.... 676
13-40-79 SW, Wyoming Asso. 29-A.... 75
24-40-79 NW, Wyoming Asso. 16-A.... 100
26-40-79 SW, Wyoming Asso. 31-A.... 50
22-40-79 SE, Wyoming Asso. 19-A..... 40
25-40-79 NW, Wyoming Asso. 34-A.... 50
23-40-79 SW, Wyoming Asso. 21-A.... 10
31-40-78 NW, Salt Creek Cons. 27-A... 40
31-40-78 NE, Salt Creek Cons. 24-AS.. 40
31-40-78 SE, Salt Creek Cons. 1-A.... 50
31-40-78 SE, Salt Creek Cons. 24-A.... 45
3-39-79 SE, Salt Creek Cons. 11-A.... 35
31-40-78 NW, Salt Creek Cons. 31-A.... 40
6-39-78 SW, Mountain & Gulf 6-A..... 35
6-39-78 NW, Mountain & Gulf 31-A.... 35
12-40-79 SE, Mountain & Gulf 27-A.... 50
23-40-79 SW, Midwest Oil 15-A..... 40
26-40-79 SE, Midwest Oil 18-A..... 40
1-39-79 NE, Midwest Oil 36-A..... 20
23-40-79 SW, Midwest Oil 31-A..... 40
1-39-79 NE, Midwest Oil 24-A..... 25
27-40-79 NE, Midwest Oil 13-A..... 35
23-40-79 SW, Midwest Oil 13-L.....1660
19-40-78 SW, Midwest Oil 25-A..... 80
26-40-79 SE, Midwest Oil 13-A..... 50
36-40-79 SE, Midwest & Wyo. Asso 16-A 75
36-40-79 SE, Midwest & Wyo. Asso. 15-A 40
36-40-79 NE, Midwest & Wyo. Asso. 25-A 50
25-40-79 SE, Midwest & Wyo. Asso. 6-A 60
25-40-79 NE, Midwest & Wyo. Asso. 24-A 50
19-39-78 NW, Texas Prod. 19-A..... dry
19-40-78 SE, Texas Prod. 34-A..... 35
32-40-78 NW, Continental Prod. B-16.. 50
19-40-78 SE, Continental Prod. N-9.... 145
30-40-78 NE, Continental Prod. B-16.. 115
30-40-78 NE, Continental Prod. B-17.. 150
19-40-78 SE, Continental Prod. N-12... 75
1-39-79 SE, Continental Prod. 24-AS.. 30
32-40-78 NW, Continental Prod. 14-A.. 50
32-40-78 NW, Continental Prod. Bl... dry
26-46-100 Enos Creek, Prairie O. & G 1 ..... dry
29-46-98 Mill Iron, Ohio Oil 69..... 15
23-44-98 NE, Empire State 1 ..... dry
11-26-90 SE, Prairie O. & G. 69..... dry
10-26-90 NE, Prairie O. & G. 64-A.... 150
7-26-89 SW, Producers & Refiners 2.. dry
7-26-89 NW, Producers & Refiners 5.. gas
25-16-77 UP, Rapollo Oil 1 ..... dry
25-22-78 Foote Creek, Prairie O. & G. 1 ..... dry
14-15-75 Wyoming Hollow Basin Co. 1 dry
13-28-93 SE, Producers & Refiners 1.. 50
1-44-61 Osage Oil Trust 1 ..... dry
18-46-63 W. J. Zitteral 1 10
30-29-80 Kinney Coastal Oil 1..... dry
34-27-113 Wyohta O. & G. 3..... 200
5-55-67 Rocky Point Fletcher et al 1.. dry
2-57-62 Bull Creek, Marine Oil 1.... dry
22-45-62 Shaw et al 1 ..... dry

Wells completed 96
Production 7389
Dry 14
Gas 1
Gas production 6,000,000

MONTANA COMPLETIONS

5-34- 2 Sweeney, Regal Consol. 6.... dry
28-35- 1 Miller, Rupp Carlson 1..... dry
20-35- 1 Zachor, Big Four Oil 1..... 5
26-35- 1 Houston, Rutherford et al 1.. 5
29-35- 1 Maughan, Sweeney Oil 3..... 100
3-34- 2 Tenbrock, S. C. Ferdig ..... dry
4-34- 2 Storne, Shoshone Oil 9..... 12
33-35- 2 Halloran, Regina Kevin 3.... 75
25-35- 2 Abell, Rochester Anoka 4.... dry
30-35- 1 Anderson, Western Drg. Co. 2 40
32-35- 1 Warner, Adams Sunburst 5... 40
33-36- 2 Anderson, Ohio Oil 1..... dry
33-35- 2 Noreen, Ohio Oil 5..... gas
29-35- 1 Anderson, Red Derr Oil 4.... 250
28-35- 2 O'Neil, Louis Hill 1..... 50
27-35- 2 Smoke, California Co. 3..... 15
29-35- 1 Bluhn, Arronow Synd. 5..... 35
30-35- 1 Emmons, Dakota Montana 3.. 50
14-35- 2 Hagerty, Sunburst Co. 3..... dry
33-35- 2 Parker, California Co. 1..... dry
35-35- 2 Abell, Sunburst Oil 1..... 50
31-35- 1 Byrne, Rose Oil 6..... dry
31-35- 1 Byrne, Fulton Oil 2 500
16-34- 2 State, Jones Oil Co. 1..... dry
32-35- 1 Warner, Hibbings Sunburst 3. 40
32-35- 1 Warner, Hibbings Sunburst 4. 40
3-34- 2 Tenbroeck, Frazer et al 1..... dry
30-35- 1 Maughan, Ohio Oil 2 450
14-35- 2 Louis, Radigan Oil Co..... 20
5-34- 2 Sweeney, Regal Consol. 5.... 50
10-35- 2 Bruins, Western Pet. Ex. 6.. dry
26-35- 2 Sohn, Rutherford et al 1..... 50
4-35- 2 Swears, O'Neil Bros. 2 75
5-34- 2 Moore, Queen City 16..... dry
25-35- 3 Campbell, Royal Canadian 2. 100
25-35- 3 Stewart, Royal Canadian 3... 25
4-35- 2 Riebe, Homestake Oil Co. 6... 20
33-35- 2 Halloran, Homestake Oil 3.... dry
21-35- 2 Pewter, Homestake Oil 6..... dry
30-35- 1 Byrne, Essex Oil 4..... 15
30-35- 1 Byrne, Essex Oil 5..... 35
29-35- 1 Anderson, Sylvester Oil 10.... 10
4-34- 2 Corey, Johnson Synd. 7..... 500
30-35- 1 Anderson, Ferdig Hughes 3... 25
30-35- 1 Anderson, Ferdig Hughes 9.. dry
29-35- 1 Maughan, Bitter Creek Oil 4.. 20
32-35- 1 Strange, Big Elephant Oil Co. 1 50
31-35- 1 Byrne, Rose Oil Co. 3..... 25
31-35- 1 Byrne, Rose Oil Co. 4..... 35
32-35- 1 Shuster, Fifty-Six Pet. 3.... 500
19-35- 1 Bluhn, Fonk et al 1..... 10
32-35- 1 O'Haire, Continental Oil 2.... dry
31-35- 1 Byrne, Rose Oil 5 600
20-35- 1 Byrne, Essex Oil 6 500
33-35- 2 Berglin, Western Pet. Ex. 4.. dry
3-34- 2 Shumaker, Cooperative Oil 1.. dry
5-34- 2 Sweeney, Regal Cons. 4..... 100
4-34- 2 Moore, Queen City Oil 14..... 225
30-35- 1 SE, Lilly et al 1 60
31-35- 1 NE, Big West Oil 11..... 500
32-35- 1 Warner, Fifty-Six Pet. 3..... 200
31-35- 1 Byrne, W. N. Fulton 2..... 200
29-35- 1 Bluhn, Arronow Synd. 4..... 40
11-15-29 Clayton, Mid-Northern Oil 6.. 140
10-15-29 Harlan, Continental Oil 4.... 50
10-15-29 Oldham, Mid-Northern Oil 19. 15
10-15-29 Oldham, Mid-Northern Oil 30. 50
21-15-30 Spokane Cat Creek 1..... dry
32-26- 2 Doheny, McClue et al 1..... dry
13- 3-22 SE, Murray Bros. 3 ..... gas

Wells completed 70
Production 5902
Dry 20
Gas 2
Gas production 8,000,000

COLORADO COMPLETIONS

36-9-68 State, Union of California 1... dry
6-9-68 Scott, Union of California 1...1200
27-4-92 Shaw, Midwest Ref. 1..... 250
2-5-69 Abbott, Douglas Oil 1 ..... dry
14-4-92 Ahearn, Yarg Prod. & Ref. 1.. dry
24-4-93 State, California Co. 1..... dry

Wells completed 6
Production 1450
Dry 4

NEW MEXICO COMPLETIONS

21-18-28 SE, Dome Oil Co. 100
21-17-29 Flynn, Welch & Yates 240
13-29-17 Roberts, Sante Fe Mutual 1.. dry
11-29-11 Continental Oil 10 ..... dry
28-18-28 NE, Illinois Prod. 13 200
28-18-28 State, Twin Lakes Oil 5..... 75
28-18-28 NW, Maljamar Oil 4..... 300
28-18-28 NW, Maljamar Oil 5..... 250
20-18-28 Rathke, Danciger P. & G. 1.. 25
21-18-28 State, Snowden McSweeney 2. 450
21-18-28 State, Snowden McSweeney 3. 300
30-18-29 SE, Burgess & Goodale ..... gas
29-18-28 NE, Royal Duke Oil 3..... 30
4-18-28 NW, P. L. Bixby 1..... 40
2-29-19 SE, Continental Oil 16..... dry
19-29-11 J. A. Leidecker et al 1..... 10

Wells completed 16
Production 2020
Dry 3
Gas 1
Gas production 1,000,000

Good Service Pleasing

The excellent service rendered to the men of the industry by The Oil and Gas Journal Classified Wants Section is appreciated by them.

They use it as a direct medium to broadcast their wants to fellow readers who respectfully consider every advertisement in the Classified Wants Section.

Good machinery, tools, etc., are being kept in operation by reason of alert men buying and selling through the Classified Wants Section.

These men know that it is economically sound for a concern to sell good equipment that it cannot use. Therefore, thrifty executives use the Classified Wants Section as an economizing move that is helpful to the entire industry.

Its absolute merit has made it the greatest petroleum publication classified section in the world.

THE OIL AND GAS JOURNAL

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Spang & Co.

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Spang & Co.

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Kerosene—
Acme Petroleum Co.
Empire Refineries, Inc.
Gulf Refining Co.
Magnolia Petroleum Co.
Pure Oil Co.

L

Lacquers—
Sherwin-Williams Co.

Lanterns—Electric—
Delta Electric Co.

Lanterns—Hand—
Delta Electric Co.

Lead and Mixed Metal Products—
Eagle Picher Lead Co.

Lead in Oil—
Eagle Picher Lead Co.
National Lead Co.

Lead Wool and Containers—
Eagle Picher Lead Co.

Lifting Jacks (See Jacks)—

Lighting Equipment—
Climax Engineering Co.
Pyle-National Co.
Westinghouse Electric & Mfg. Co.

Liquid Level Controls (See Controllers)—

Litharge—
Eagle Picher Lead Co.
National Lead Co.

Loaders—Trucks—
Barber-Greene Co.

Long Distance Telephone—
American Telephone & Telegraph Co.

Lubricating Devices—
McCord Radiator & Mfg. Co.

Lubricating Oils (See Oils)—

Lubricators—
Ajax Iron Works

Lubricators—Force Feed—
Manzel Brothers Co.
McCord Radiator & Mfg. Co.

M

Machine Tools—
Ryerson, Jos. T., & Sons, Inc.

Manholes—Tank—
Oil Conservation Engineering Co.

Manifolds—
Reid, Joseph, Gas Engine Co.

Metal Buildings Sectional (All Types) (See Buildings)—

Meters—Gas—
Foxoboro Co., Inc.
Metric Metal Works
Pittsburgh Meter Co.
Roots, P. H. & F. M. Co.
Westcott & Greis

Meters—Gasoline—
Pittsburgh Meter Co.

Meters—Oil—
Pittsburgh Meter Co.

Molded Goods—Rubber—
Goodyear Tire & Rubber Co.

Motor Controlled Apparatus (See Apparatus—Motor Control)—

Motors—Electric—
Fairbanks-Morse & Co.
Westinghouse Electric & Mfg. Co.

Motors—Gasoline (See Engines—Gasoline)—

Motor Trucks (See Trucks)—

N

Naphtha—
Pure Oil Co.

Natural Gasoline (See Gasoline—Natural)—

Natural Gasoline Plant Equipment
American Tank Co.
Chaplin-Fulton Mfg. Co.
Continental Supply Co.
Cooper, C. & G. Co.
Griscom-Russell Co.
Roots, P. H. & F. M. Co.
Smith Separator Co.
Westcott & Greis

Nitrogen—
Linde Air Products Co.

O

Oil and Gas Pipe Line Construction—
Hope Engineering & Supply Co.

Oil Burners (See Burners—Oil)—

Oil Engines, Semi-Diesel (See Engines—Semi-Diesel Oil)—

Oil Field Equipment—
Baash-Ross Tool Co.
Baker Casing Shoe Co.
Bridgeport Machine Co.
Continental Supply Co.
Cunningham Co.
Gaso Pump & Burner Mfg. Co.
International Derrick & Equipment Co.
Iron King Mfg. Co.
Jarecki Mfg. Co.
Kaw Boiler Works Co.
National Supply Co.
Parkersburg Machine Co.
Parkersburg Rig & Reel Co.
Reed Roller Bit Co.
Regan Forge & Engineering Co.
Reid, Joseph, Gas Engine Co.
Republic Supply Co.
Trumble Gas Trap Co.

Oil Filters—
Burt Mfg. Co.

Oil—Fuel—
Acme Petroleum Co.
Empire Refineries, Inc.
Gulf Refining Co.
Magnolia Petroleum Co.
Pure Oil Co.
Sinclair Refining Co.
The Texas Co.

Oil—Gas—
Acme Petroleum Co.
Gulf Refining Co.
Pure Oil Co.
Sinclair Refining Co.
The Texas Co.

Oil—Lubricating—
Barnsdall Refining Co.
Empire Refineries, Inc.
Gulf Refining Co.
Magnolia Petroleum Co.
Pennzoil Co.
Pure Oil Co.
Sinclair Refining Co.
The Texas Co.

Oil—Tractor—
Barnsdall Refining Co.
Gulf Refining Co.
Pennzoil Co.
Pure Oil Co.

Oiling Devices—
Lunkenheimer Co.

Oil Meters (See Meters)—

Oil Piping Equipment (See Fittings)—

Oil Reclaiming Process—
Barnickel, Wm. S. & Co.
Houston Pump & Supply Co.

Oil Refinery Equipment (See Refinery Equipment)—

Oil Savers—
Arbon, Paul, & Co.
Oil Well Improvements Co.

Oil Securities (See Securities)—

Oil Suction and Discharge Hose (See Hose)—

Oil Testing Instruments—
Tagliabue, C. J., Mfg. Co.

Oil Well Cementing—
Halliburton, Erle, P.

Oil Well Screens (See Screens)—

Oil Well Tools—
Dunn Mfg. Co.
Hinderliter Tool Co.
Reed Roller Bit Co.
Star Drilling Machine Co.
Titusville Forge Co.
U. S. Tool Co.

Over Shots—
Reed Roller Bit Co.
Regan Forge & Engineering Co.

Oxygen—
Linde Air Products Co.

P

Packer Release—
Acme Fishing Tool Co.

Packers—
Goodyear Tire & Rubber Co.
Guiberson Corp.
Larkin & Co.
Layne & Bowler Co.
Oil Well Supply Co.
Regan Forge & Engineering Co.
Spang & Co.

Packing—
Black, Sivalls & Bryson, Inc.
Garlock Packing Co.
Goodrich, B. F., Rubber Co.
Imperial Belting Co.
Johns-Manville, Inc.

Paints—
Aluminum Co. of America
Continental Supply Co.
Cook Paint & Varnish Co.
Detroit Graphite Co.
Eagle Picher Lead Co.
Sherwin-Williams Co.

Paraffin Wax Plant Equipment—
Carbondale Machine Co.

Pipe—Cast Iron—
American Cast Iron Pipe Co.
Continental Supply Co.
Greenspon's, Jos., Sons Iron & Steel Co.
International Supply Co.
U. S. Cast Iron Pipe Fdy. Co.

Pipe—Lead—
Eagle Picher Lead Co.

Pipe—Steel—
Kellogg, M. W. Co.
National Supply Co.
National Tube Co.
Republic Iron & Steel Co.
South Chester Tube Co.
Spang, Chalfant & Co., Inc.
Superior Tube Co.

Pipe—Wrought Iron—
Frick-Reid Supply Co.
Oil Well Supply Co.
Reading Iron Co.
Superior Tube Co.

Pipe and Nipple Threading Machines—
Bignall & Keeler Machine Wks.
Jarecki Mfg. Co.
Landis Machine Co.
Standard Engineering Co.

Pipe Clamps (See Clamps—Pipe)

Pipe Fittings (See Fittings)—

Pipe Grips—
Larkin & Co.

Pipe Headers—
National Tube Co.
Newton Process Mfg. Co.

Pipe Line Construction Tools—
National Transit Pump & Machine Co.

Pipe Line Ditchers (See Ditchers)

Pipe Line Equipment—
Gaso Pump & Burner Mfg. Co.

Pipe Screwing Machines—
Buckeye Traction Ditcher Co.

Pipe Threading Dies (See Dies)—

Pipe Tools—
Armstrong Brothers Tool Co.
Nye Tool & Machine Works

Piping—Fabricated—
Midwest Piping & Supply Co.

Piping—Steel and Iron—
Crane Co.
Power Piping Co.
United Iron Works

Pistons—
Guiberson Corp.
Heppenstall Forge & Knife Co.

Pistons—Expansion—
Wilson Oil Tools Corp.

Pistons—Slush Pump—
Arbon, Paul & Co.
Guiberson Corp.

Plain End Pipe Couplings (See Couplings—Plain End Pipe)

Plugs—Bottom Water—
Guiberson Corp.

Polish Rods (See Rods—Polish)—

Portable Drilling Rigs (See Rigs)

Power Puller—
Jones Oil Well Reamer Co.

Power Pumps (See Pumps)—

Power Units—Portable (See Engines)—

Pre-Heaters—
Newton Process Mfg. Co.

Pulleys—Casing—
Bridgeport Machine Co.

Pulleys—Friction Clutch—
Havana Mfg. Co.

Pulling Machines—
Iron King Mfg. Co.
National Supply Co.
Safety Pulling Machine Co.

Pumping and Pulling Motors—Electric—
Westinghouse Electric & Mfg. Co.

Pumping Equipment—
American Well Works
Axelson Machine Co.
Goulds Mfg. Co.
Jones, S. M., Co.
Myers, F. E., Bro. & Co.
Oil Well Supply Co.
Prescott Co.
Waukesha Motor Co.

Pumping Hangers—
Bridgeport Machine Co.

Pumping Jacks (See Jacks)—

Pumping Gears Units—
Nuttall, R. D. & Co.

Pumping Powers—
Barnes Mfg. Co.
Bessemer Gas Engine Co.
Buda Co.
Climax Engineering Co.
Frick-Reid Supply Co.
Jones, S. M., Co.
Kansas City Hay Press Co.
National Supply Co.
Oil Well Supply Co.
Pattin Brothers Co.
Reid, Joseph, Gas Engine Co.
Spence Machine Co.
Titusville Iron Works Co.

Pumps—Air Lift—
Ingersoll-Rand Co.

Pumps—Boiler Feed—
Ajax Iron Works
Fairbanks-Morse & Co.
Gardner Governor Co.
Worthington Pump & Machinery Corp.

Pumps—Centrifugal—
American Well Works
Dean Hill Pump Co.
Fairbanks-Morse & Co.
Worthington Pump & Machinery Co.

Pumps—Direct Driven—
Bessemer Gas Engine Co.

Pumps—Electric
Prescott Co.

Pumps—Fuel Oil Service—
Blackmer Rotary Pump Co.

Pumps—Gear Driven—
Gaso Pump & Burner Mfg. Co.
Lucey Mfg. Corp.
Prescott Co.

Pumps—Pipe Line—
Frick-Reid Supply Co.
Gardner Governor Co.
National Transit Pump & Machine Co.
Prescott Co.
Worthington Pump & Machinery Corp.

Pumps—Power—
Dean Brothers Co.
Fairbanks-Morse & Co.
Gardner Governor Co.
Gaso Pump & Burner Mfg. Co.
Myers, F. E., Bro. & Co.
National Transit Pump & Machine Co.
Novo Engine Co.
Prescott Co.
Waukesha Motor Co.
Worthington Pump & Machinery Corp.

Pumps—Refinery—
Dean Hill Pump Co.
Gardner Governor Co.
Gaso Pump & Burner Mfg. Co.
Kinney Mfg. Co.
National Transit Pump & Machine Co.
Worthington Pump & Machinery Corp.

Pumps—Rotary—
Blackmer Rotary Pump Co.
Roots, P. H. & F. M., Co.

Pumps—Sand—
Bridgeport Machine Co.
Larkin & Co.

Pumps—Slush—
Gardner Governor Co.

Pumps—Steam—
Dean Brothers Co.
Fairbanks-Morse & Co.
Frick-Reid Supply Co.
Gardner Governor Co.
Gaso Pump & Burner Mfg. Co.
Lucey Mfg. Corp.
National Transit Pump & Machine Co.
Presco H. Co.
Vogt Brothers Mfg. Co.

Pumps—Suction—
Gaso Pump & Burner Mfg. Co.

Pumps—Vacuum—
Bessemer Gas Engine Co.
Clark Brothers Co.
Gaso Pump & Burner Mfg. Co.
Miller Improved Gas Engine Co.
Roots, P. H. & F. M., Co.
Worthington Pump & Machinery Corp.

Pumps—Water—
American Well Works.
Gaso Pump & Burner Mfg. Co.
Presco H. Co.

R

Ratchet Pipe Cutters—
Toledo Pipe Threading Machine Co.

Ratchet Pipe Threaders—
Toledo Pipe Threading Machine Co.

Ratchet Stocks and Dies—
Toledo Pipe Threading Machine Co.

Ratchet Wrenches (See Wrenches)

Reamers—
Bridgeport Machine Co.
Jones Oil Well Reamer Co.

Receiving Boxes—
Reid, Joseph, Gas Engine Co.

Recorders—Differential Pressure—
Metric Metal Works

Refinery Equipment—
American Radiator Co.
Braun, C. F. & Co.
Carbondale Machine Co.
Chicago Bridge & Iron Works
Graver Corp.
Griscom-Russell Co.
Kaw Boiler Works Co.
Kellogg, M. W. Co.
Newton Process Mfg. Co.
Power Piping Co.
Power Specialty Co.
Ross-Meehan Foundries
Reid, Joseph Gas Engine Co.
Smith Separator Co.
Universal Oil Products Co.
Vogt, Henry, Machine Co.
Walsh & Weidner Boiler Co.
Westcott & Greis

Refinery Pumps (See Pumps)—

Refractories—Furnace, Stills and Baffles—
Botfield Refractories Co.

Refrigerating Machinery—
Carbondale Machine Co.
Climax Engineering Co.
Vogt, Henry, Machine Co.

Regulators—
Chaplin-Fulton Mfg. Co.
Fisher Governor Co. Inc.
Oil Conservation Engineering Co.
Smith Separator Co.

Rental Service—
Bridgeport Machine Co.

Reversible Clutches—
Bessemer Gas Engine Co.

Rig Irons—
Bradford Rig & Reel Co.
International Supply Co.
Lucey Mfg. Corp.
National Supply Co.
Oil Well Supply Co.
Parkersburg Rig & Reel Co.

Rigs—Drilling, All Steel—
Carnegie Steel Co.
International Derrick & Equipment Co.
Moore, Lee C., & Co., Inc.

Rigs—Portable Drilling—
National Supply Co.
National Turnbuckle Derrick Co.
Star Drilling Machine Co.

River Clamps (See Clamps)—

Rods—Polish—
Bradford Motor Works
Jones, S. M., Co.

Rods—Pull—
Axelson Machine Co.
Columbus Sucker Rod Co.
Jones, S. M., Co.
Kansas City Bolt & Nut Co.

Rods—Sucker—
Axelson Machine Co.
Columbus Sucker Rod Co.
D. & B. Pump & Supply Co.
Frick-Reid Supply Co.
Jones, S. M., Co.
Kansas City Bolt & Nut Co.
National Supply Co.
Republic Supply Co.

Rods—Valve—
Jones, S. M., Co.

Roofing—
Johns-Manville, Inc.

Roofing Tin Plates (See Tin Plates—Roofing)—

Rope Socket Metal—
Eagle Picher Lead Co.

Rope—Manila—
Ajax Rope Co., Inc.
Bovaird Supply Co.
Republic Supply Co.
Wall Rope Works Inc.

Rope—Wire—
American Cable Co.
Bovaird Supply Co.
Broderick & Bascom Rope Co.
Bridgeport Machine Co.
International Supply Co.
Leschen, A., & Sons Wire Rope Co.
Wickwire-Spencer Steel Corp.

Rotary Bit Steel—
Heppenstall Forge & Knife Co.

Rotary Disc Bits (See Bits)—

Rotary Drilling Equipment—
Climax Engineering Co.
Continental Supply Co.
Frick-Reid Supply Co.
International Derrick & Equipment Co.
Link-Belt Co.
Lucey Mfg. Corp.
Lufkin Foundry & Machine Co.
National Supply Co.
Oil Well Supply Co.
Republic Supply Co.
Titusville Iron Works Co.

Rotary Drive Bushings (See Bushings—Rotary Drive)—

Rotary Lines (See Rope—Wire)—

Rotary Post—
Reed Roller Bit Co.

Rotary Rock Bits (See Bits)—

Rotary Tool Joints—
Bartlesville Supply Co.
Hughes Tool Co.

Rotary Ventilators—
Swartwout Co.

Rubber Belting (See Belting)—

Rubber Hose (See Hose)—

Run Down Tanks (See Tanks)—

Rust Preventatives—
Dearborn Chemical Co.
Eagle Picher Lead Co.

S

Sand Line Caps—
Oil Well Improvements Co.

Sand Lines—Wire—
Broderick & Bascom Rope Co.
Wickwire-Spencer Steel Corp.

Sand Pumps (See Pumps—Sand)

Screens—Oil Well—
Layne & Bowler Co.

Screens—Water Well—
Layne & Bowler Co.

Screws—Temper—
Arbon, Paul, & Co.
Burns Tool Co.

Seamless Steel Couplings (See Couplings—Seamless Steel)

Securities—Oil—
Pforsheimer, Carl H., & Co.

Separators—Centrifugal—
Miller, Max B. & Co.

Separators—Gas and Oil
American Tank Co.
Smith Separator Co.

Sheets—
American Steel Band Co.

Sheets—Blue Annealed—
Kansas City Bolt & Nut Co.

Sheets — Corrugated, Black and Galvanized—
American Sheet & Tin Plate Co.
American Steel Band Co.

Sheets—Steel—
American Sheet & Tin Plate Co.
Republic Iron & Steel Co.

Shovels—
Ames Shovel & Tool Co.

Sleeves—
Dayton Pipe Coupling Co.
Dresser, S. R., Mfg. Co.

Sleeves—Split—
Dayton Pipe Coupling Co.
Dresser, S. R., Mfg. Co.

Slush Pumps Pistons (See Pistons)—

Slush Pumps (See Pumps)—

Smoke Stacks—
Donovaan Boiler Works.

Sockets—
Acme Fishing Tool Co.
Bridgeport Machine Co.
Spang & Co.

Solders—
Eagle-Picher Lead Co.

Spears—
Acme Fishing Tool Co.

Special Steel (See Steel—Special)

Split Sleeves (See Sleeves)—

Sprockets—Power Transmission—
Ajax Iron Works
Chain Belt Co.

Stationary Pipe Threading Die Heads (See Die Heads)—

Steam Pumps—(See Pumps)—

Steel—All Kinds—
Ryerson, Jos., T., & Sons, Inc.

Steel—Alloy—
Central Steel Co.

Steel—Bit—
Central Steel Co.

Steel—Hot Rolled Strip—
Central Steel Co.

Steel—Special—
Central Steel Co.

Steel Band Wheels (See Band Wheels—Steel)—

Steel Bridges (See Bridges)—

Steel Bull Wheels (See Bull Wheels—Steel)—

Steel Castings (See Castings)—

Steel Couplings for Casing, Line Pipe, Drill Pipe and Tubing (See Couplings)—

Steel Crown Blocks (See Crown Blocks)—

Steel Derricks (See Derricks)—

Steel Fabricators—Structural—
Austin Co.
Braden Co.
Graver Corp.
International Derrick & Equipment Co.
Pittsburgh-Des Moines Steel Co.

Steel Fittings (See Fittings)—

Steel Pitmans—
International Derrick & Equipment Co.
Moore, Lee C., & Co., Inc.
Slater Brothers Turnbuckle Derrick Co.

Steel Plate Construction—
Chicago Bridge & Iron Works
Graver Corp.
Tulsa Boiler & Machinery Co.
Vogt, Henry, Machine Co.

Steel Sheets—(See Sheets, Steel)—

Steel Valves (See Valves—Steel)—

Steel Walking Beams (See Walking Beams—Steel)—

Steel Wheels and Tug Rims—
Carnegie Steel Co.
International Derrick & Equipment Co.

Stills—
Blaw-Knox Co.
Chicago Bridge & Iron Works
Graver Corp.
Kellogg, M. W. Co.
Newton Process Mfg. Co.
Petroleum Iron Works Co.
United Iron Works, Inc.
Vogt, Henry, Machine Co.

Stocks and Dies—
Toledo Pipe Threading Machine Co.

Structural Steel Fabricators (See Steel Fabricators)—

Stuffing Boxes—
Axelson Machine Co.
Kansas City Hay Press Co.

Sucker Rods (See Rods—Sucker)—

Suction Pumps—(See Pumps)—

Sulphuric Acid—
Eagle Picher Lead Co.

Swabs—
Arbon, Paul, & Co.
Guiberson Corp.
Hoffman Mfg. Co.

Swedge Nipples—
Dresser, S. R. Mfg. Co.
Harrisburg Pipe & Pipe Bending Co.

Swing Joints—
Oil Conservation Engineering Co.

Swivels—
Layne & Bowler Co.
Lucey Mfg. Corp.
Titusville Iron Works Co.

T

Tank Cars (See Cars—Tanks)—

Tank Cars Leased (See Cars)—

Tank Equipment—
Oil Conservation Engineering Co.
Westcott & Greis

Tanks—Bolted—
American Tank Co.
Black, Sivalls & Bryson, Inc.
Butler Mfg. Co.
Gantz Tank Mfg. Co.
Maloney Tank Mfg. Co.
Parkersburg Rig & Reel Co.

Tanks—Bulk Station—
Columbian Steel Tank Co.
Graver Corp.

Tanks—Elevated Steel—
Chicago Bridge & Iron Works

Tanks—Field Storage—
American Car & Foundry Co.
American Tank Co.
Black, Sivalls & Bryson, Inc.
Donovan Boiler Works
Graver Corp.
Kaw Boiler Works
Kewanee Boiler Co.
Maloney Tank Mfg. Co.
Pittsburgh-Des Moines Steel Co.
Riter-Conley Co.
Tulsa Boiler & Machinery Co.
United Iron Works, Inc.

Tanks—Horizontal Storage—
Black, Sivalls & Bryson, Inc.
Columbian Steel Tank Co.
Graver Corp.
Maloney Tank Mfg. Co.
Petroleum Iron Works Co.

Tanks—Run Down—
Black, Sivalls & Bryson, Inc.
Donovan Boiler Works
Graver Corp.
Newton Process Mfg. Co.
Pioneer Tank & Boiler Co.

Tanks—Truck—
American Tank Co.
Butler Mfg. Co.
Columbian Steel Tank Co.
White Co.

Tanks—Underground—
Black, Sivalls & Bryson, Inc.
Butler Mfg. Co.
Columbian Steel Tank Co.
Graver Corp.
Kewanee Boiler Co.
Petrolem Iron Works Co.
Pittsburgh-Des Moines Steel Co.
Tulsa Boiler & Machinery Co.

Tanks—Welded—
American Tank Co.
Chicago Bridge & Iron Works
Gants Tank Co.

Tanks—Wooden—
Black, Sivalls & Bryson, Inc.

Taper Taps—
Hughes Tool Co.

Tapes—Measuring for Oil Gauging—
Lufkin Rule Co.

Tee Casing Heads (See Casing Heads)—

Temperature Controllers (See Controllers—Temperature)—

Temper Screws (See Screws)

Thermometers, Indicating and Recording—
American Schaeffer & Budenberg Co.
Bristol Co.
Foxboro Co., Inc.
Tagliabue, C. J., Mfg. Co.
Taylor Instrument Co.

Threading Machines—
Bignall & Keeler Machine Wks.
Landis Machine Co.

Thread Protectors—
Spang & Co.

Tin Plates—Bright—
American Sheet & Tin Plate Co.

Tin Plates—Roofing—
American Sheet & Tin Plate Co.

Tires—Automobile—
Continental Supply Co.

Tires—Pneumatic & Solid—
Kelly Springfield Tire Co.

Tires—Truck—
Kelly-Springfield Tire Co.

Tongs—
Bridgeport Machine Co.
Dunn Mfg. Co.
Wilson Oil Tools Corp.

Tongs—Back Up—
Williams, J. H., & Co.

Tongs—Break Out—
Reed Roller Bit Co.
Williams, J. H., & Co.

Tongs—Casing—
Guiberson Corp.

Tongs—Chain Pipe—
Williams, J. H., & Co.

Tongs—Pipe—
National Transit Pump & Machine Co.

Tongs—Tool Joint—
Guiberson Corp.
Hughes Tool Co.
Reed Roller Bit Co.

Tool Joints—
Bridgeport Machine Co.
Hughes Tool Co.
Lucey Mfg. Corp.
Regan Forge & Engineering Co.

Tool Joint Tongs (See Tongs)—

Tools—Fishing and Drilling (See Drilling and Fishing Tools)—

Tools — Oil Well Drilling (See Drilling and Fishing Tools)—

Torches—
Oxweld Acetylene Co.

Tractor Oil (See Oil—Tractor)—

Tractors—
International Harvester Co. of America.

Transmission Belt—Rubber—
Goodrich, B. F., Rubber Co.

Transmission Lining—
Stanley Belting Corp.

Traveling Block—
Lucey Mfg. Corp.
Regan Forge & Engineering Co.
Wright Manufacturing Co.

Trenchers—Vertical Boom—
Barber-Greene Co.

Trucks—Motor—
General Motors Truck Co.
International Harvester Co. of America
White Co.

Truck Tanks (See Tanks)—

Truck Tires (See Tires—Truck)—

Tubes—Boiler, Charcoal Iron—
Reading Iron Co.

Tubes—Boiler Steel—
National Tube Co.

Tubing—
National Tube Co.
Reading Iron Co.
Spang, Chalfant & Co., Inc.
Superior Tube Co.

Tubing Catchers—
Dunn Mfg. Co.
Guiberson Corp.

Tubing Elevators (See Elevators, Casing and Tubing)—

Tubing Rings—
Oil Well Improvements Co.

Tubular Goods—
Oil Well Supply Co.
Republic Iron & Steel Co.
South Chester Tube Co.
Spang, Chalfant & Co., Inc.

Tubular Goods—Wrought Iron—
Reading Iron Co.
South Chester Tube Co.

Turbines for Lighting Equipment—
Lucey Mfg. Corp.
Pyle National Co.
Westinghouse Electric & Mfg. Co.

Turbine Generators (See Generators—Turbine)—

Turnbuckle Derricks (See Derricks)—

U

Underground Tanks (See Tanks)

Underreamer Bit Steel—
Heppenstall Forge & Knife Co.

Underreamer Cutter Steel—
Heppenstall Forge & Knife Co.

Underreamers—
Bridgeport Machine Co.
Guiberson Corp.
Wilson Oil Tools Corp.

Unions—
Continental Supply Co.
Kelly & Jones Co.

V

Vacuum Pumps (See Pumps)—

Valuations—
American Appraisal Co.

Valves—Blow-off—
Homestead Valve Co.

Valves—Brass and Bronze—
Chapman Valve Mfg. Co.
Lunkenheimer Co.
Reading Steel Casting Co.
Walworth Mfg. Co.

Valves—Check—
Gaso Pump & Burner Mfg. Co.

Valves—Drop Forged Steel—
Edward Valve & Mfg. Co.
Vogt, Henry, Machine Co.

Valves—Gate—High and Low Pressure—
Chapman Valve Mfg. Co.
Continental Supply Co.
Crane Co.
Darling Valve & Mfg. Co.
Homestead Valve Co.
Jarecki Mfg. Co.
Kennedy Valve Mfg. Co.
Kelly & Jones Co.
Ludlow Valve Mfg. Co.
Lunkenheimer Co.
Pittsburgh Reinforced Brazing & Machine Co.
Powell, Wm., Co.

Valves—Iron—
Reading Steel Casting Co.

Valves—Relief—Supersensitive
Davis Regulator Co.

Valves—Steel—
Edward Valve & Mfg. Co.
Lunkenheimer Co.
Metric Metal Works.
Pittsburgh Reinforced Brazing & Machine Co.
Powell, Wm., Co.
Reading Steel Casting Co.

Valves—Tank Vent—
Black, Sivalls & Bryson, Inc.
Oil Conservation Engineering Co.

Valves—Working Barrel—
Axelson Machine Co.
Hough, Charles N. Mfg. Co.
Northrup Equipment Co.

Varnishes—
Sherwin-Williams Co.

W

Wagons—Truss Wheel—
Athey Truss Wheel Co.

Walking Beams—Steel—
Moore, Lee C., & Co., Inc.

Water Gauge Cocks (See Cocks)—

Water Pumps (See Pumps)—

Water Softeners and Filters—
Graver Corp.

Water Well Screens (See Screens)

Wax—
Barnsdall Refining Co
Gulf Refining Co.
Pure Oil Co.

Weight Indicators—
Hughes Tool Co.

Welded Tanks—(See Tanks)—

Welding Accessories—Electric—
Wilson Welder & Metals Co.

Welding and Cutting Apparatus, Etc.—
Oxweld Acetylene Co.

Welding Machines—Electric—
Wilson Welder & Metals Co.

Welding Supplies—
Oxweld Acetylene Co.

Welding Wire—
Frick-Reid Supply Co.
Oxweld Acetylene Co.
Page Fence & Wire Products Ass'n.
Wilson Welder & Metals Co.

Well Drilling and Fishing Tools (See Drilling and Fishing Tools)—

Well Drilling Equipment (See Drilling Equipment)—

Well Shooting—
Eastern Torpedo Co.
Zero Hour Torpedo Co.

Winches—
Braden Co.
Oil Conservation Engineering Co.

Wire Lines (See Cables—Steel)—

Wire Ropes (See Rope—Wire)—

Wood Patterns and Models—
Gaso Pump & Burner Mfg. Co.

Working Barrels—
Axelson Machine Co.
Bradford Motor Works
Franklin Valveless Engine Co.
Frick-Reid Supply Co.
Hough, Charles N., Mfg. Co.
McGregor Working Barrel Co.
Northrup Equipment Co.

Working Barrel Valves (See Valves—Working Barrel)—

Wrenches—Drop Forged—
Williams, J. H., Co.

Wrenches—Pipe—
Trimont Mfg. Co.
Walworth Mfg. Co.

Wrenches—Ratchet—
Dresser, S. R., Mfg. Co.

Z

Zinc Oxide—
Eagle Picher Lead Co.

Oklahoma-Kansas and Eastern Pipe Line Report

OKLAHOMA-KANSAS

Pipe Line Statement for July, 1925

Runs

	Month	Da. Av.
*Prairie P. L. Co.	4,470,200	144,200
Gulf P. L. Co.	1,283,994	41,419
Texas P. L. Co.	575,082	18,648
Magnolia Pet. Co.	1,031,333	33,269
Empire P. L. Co.	899,692	29,020
Cosden P. L. Co.	785,229	25,330
Sinclair P. L. Co.	1,398 100	45,100
*Other lines	7,719,000	249,000
Total July	18,165,630	585,986
Total June	17,214,563	573,819
Difference	951,067	12,167

Shipments

†Prairie Pipe Line Co.	4,716,115	157,204
*Prairie P. L. Co.	4,822,608	155,568
Gulf P. L. Co.	1,279,186	41 263
Texas P. L. Co.	410,509	13,242
Magnolia Pet. Co.	1,252.985	40.419
Empire P. L. Co.	992,422	32,014
Cosden P. L. Co.	663,736	21,411
†Sinclair P. L. Co.	2,268,870	73,189
*Other Lines	8,122,000	262,000
Total July	18,812,316	639,106
Total June	19,910,042	663,668
Difference	97,726	24,562

Stocks

*Prairie O. & G. Co.	24,525,000
*Prairie P. L. Co.	2,000,000
Gulf P. L. Co. & Gypsy Oil Co.	8,102,460
The Texas Co.	4,773,710
Magnolia Pet. Co.	7,154.232
Empire P. L. Co.	3,292,080
Cosden P. L. Co.	2,350,437
Sinclair Crude Oil Pur. Co.	24,500,000
Certer Oil Co.	17,012,142
*Other Lines	10,500,000
Total July	104.210,051
Total June	106,918,582
Difference	2,708,471

NOTE—Stocks do not include approximately 6,600,000 bbls. of crude oil held in storage on private tank farms and leases.

*Estimated. †Prairie shipments include Texas crude oil and Sinclair shipments include Texas and Wyoming crude oil.

EASTERN PIPE LINES

Runs From Wells

In the following table will be found the regular receipts from wells by various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for June and July:

	June '25	July '25
Nat. Transit	172,001.29	163,353.62
S. W. Pa. P. L.	86,007.04	86,680.88
Eureka P. L.	363.322.68	367,819.25
Buckeye P L (Macksburg)	293,724.58	299,163.38
Buckeye P. L. (Cleveland)	13,265.82	13,373.21
Buckeye P. L. (Lima, etc.)	146,252.83	141,313.96
Indiana P. L.	12,891.08	11,984.81
Cumberland P. L.	290,298.73	313,908.38
New York Transit	19,287.60	19,566.44
Tidewater P. L.	147,209.66	154,800.11
Pure Oil	186,067.48	183,237.30
Emery P. L.	49,218.50	50,999.53
Indian Ref.	90,018.19	93,779.94
Paragon Dev.	24,742.14	23,666.10
Pittsburgh P. L.		7,976.03
Total	1,899,377.63	1,941,804.62
Daily average	61,270.24	62,638.86

Note—Indian Refining Co. also reported other receipts of 353,993.01 bbls. Paragon Refining Co. had other receipts of 177,-993.55 bbls. Paragon Development Co. had other receipts of 3,257.81 bbls. Pure Oil had other receipts of 32,591.83 bbls. Pittsburgh Pipe Line and other receipts of 2,007.03 bbls.

Petroleum Deliveries

The following tables exhibit the shipments or regular deliveries of various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for June and July:

	June '25	July '25
Nat. Transit	320,520.47	378,171.20
S. W. Pa. P. L.	336,546.00	351,860.31
Eureka P. L.	187,674.83	165,860.18
Buckeye P. L. (Macksburg)	131,165.43	103,248.69
Buckeye P. L. (Cleveland)	1,214.54	739.09
Buckeye P. L. (Lima, etc.)	962,881.53	1,019,235.51
Indiana P. L.	979,887.76	1,016,237.87
Cumberland P. L.	149,371.73	147,658.16
Crescent P. L.	46,146.60	22,498.79
New York Transit	333,637.40	522,403.15
Northern P. L.	135,567.36	142,147.95
Tidewater P. L.	150,624.26	168,760.54
Pure Oil	222,505.40	232,769.23
Emery P. L.	46,976.71	51,616.93
Paragon Ref.	206,632.16	194,291.32
Indian Ref.	340,609.05	455,773.33
Paragon Dev.	29,687.52	20,860.66
Pittsburgh P. L.		9,370.15
Total	4,633,487.73	5,001,493.06
Daily average	149,467.34	161,338.49

Paragon Development had other receipts of 14,613.73 bbls.

Gross Stocks

The gross stocks held by various pipe lines in the oil producing section of New York, Pennsylvania, West Virginia, Ohio Indiana and Kentucky at the close of June and July were as follows:

	June '25	July '25
Nat. Transit	953,373.29	1,049,158.63
S. W. Pa. P. L.	727,762.35	679,349.73
Eureka P. L.	1,372,138,59	1,368,320.62
Buckeye P. L. (Macksburg)	256,336.67	259,449.10
Buckeye P. L. (Cleveland)	32,593.90	45,131.11
Buckeye P. L. (Lima, etc.)	3,363,803.39	3,594,400.38
Indiana P. L.	586,016.31	575,519.72
Cumberland P. L.	580,073.99	602,764.14
Southern P. L.	375,084.98	408,033.34
Crescent P. L.	58,190.72	32,557.96
New York Transit	1,041,112.91	817,869.37
North P. L.	1,048,050.32	960,052.73
Pure Oil	409.109.26	390.271.16
Emery P. L.	28,039.76	27,785.01
Paragon Ref.	161,678.55	144,615.56
Indian Ref.	95,550.10	100,650.93
Paragon Dev.	4,940.51	6,642.95
Pittsburgh P. L.		4,380.97
Total	11,093,795.80	11,067,453.41
Decrease	113,766.13	26,342.39

Grades of Oil

The following table shows the amount of the different grades of oil held by the Eastern pipe lines at the close of June and July, showing the gross stocks of the above fields:

	June '25	July '25
Penna	3,639,325.56	3,652,264.08
Lima	1,263,321.15	1,232,851.05
Kentucky	1,212,445.28	1,244,959.98
Mid-Continent	4,944,848.33	4,910,618.25
Illinois	33,855.48	26,760.05
Total	11,093,795.30	11,067,453.41

Daily Average Runs

The following table shows the daily average runs of the Pennsylvania, Lima and Kentucky oil fields for the past four years:

	1922	1923	1924	1925
January	67,702	75,790	62,638	56,831
February	75,096	71,092	68,023	60,606
March	78,531	76,592	68,721	60,575
April	77,462	75,814	71,058	60,062
May	77,592	77,365	63,942	59,217
June	76,193	77,593	63,230	61,270
July	76,435	71,879	64,208	62,639
August	79,387	76,910	59,942	.....
September	78,512	72,358	62,930	.....
October	77,209	76,256	64,976	.....
November	75,313	70,762	56,282	.....
December	73,351	69,271	55,814	.....

Daily Average Shipments

The following table gives daily average shipments from the Pennsylvania, Lima and other fields for the past four years:

	1922	1923	1924	1925
January	119,792	171,067	145,518	157,889
February	111,362	164,219	148,732	160,863
March	127,753	185,487	147,098	164,591
April	127,068	170,751	147,611	151,429
May	127,840	177,102	134,997	146,995
June	137,833	173,598	143,010	149,467
July	137,572	168,330	124,187	161,338
August	153,275	142,766	123,120	.....
September	158,761	137,366	127,325	.....
October	165,345	134,597	123,170	.....
November	165,677	131,426	124,400	.....
December	172,861	139,909	151,392	.....

Gross Stocks

In the following table will be found the gross stocks of the various lines of the Pennsylvania, Lima and Kentucky oil fields, including oil received from other lines, at the close of each month for the past three years:

	1923	1924	1925
January	14,040,567	12,967,202	11,353,376
February	14,028,427	11,844,068	11,192,924
March	13,873,146	10,906,752	11,158,287
April	13,737,575	10,922,742	11,062,083
May	13,815,622	11,336,309	11,207,463
June	14,541,253	11,544,204	11,093,794
July	14,645,584	12,062,361	11,067,453
August	14,770,539	12,231,676	.....
September	14,803,444	12,206,836	.....
October	14,504,111	12,664,061	.....
November	14,157,726	12,368,530	.....
December	13,444,361	11,583,680	.....

Franklin Pipe Line Co.

The following table exhibits the condition of the Franklin Pipe Line at the close of business for the months named and not counted in the stocks and averages reported above:

	Receipts	Shiptments	Stocks
1924—			
July	3,067.74	3,334.29	13,214.61
August	2,001.36	6.21	16,109.71
September	2,794.58	5,775.89	13,128.43
October	3,343.40	1,880.50	14,590.33
November	2,700.13	482.89	12,427.84
December	3,120.34	2,659.13	12,888.77
1925—			
January	1,730.86	1,681.15	12,938.48
February	2,702.05	4,564.70	11,075.83
March	2,177.21	2,254.20	11,898.74
April	3,040.41	1,780.11	13,159.04
May	2,814.99	5,719.90	10,254.13
June	3,052.75	1,221.83	12,085.05
July	2,639.34	3,174.10	11,550.29

The Illinois Field

The following table gives the report of the Illinois Pipe Line Co. in Illinois:

Gross stocks August 1	1,889,674.79
Runs from wells	694,990.13
Other receipts	562,569.82
Regular deliveries	466,976.64
Other deliveries	649,021.15

The amount of Illinois oil run by the Tidewater Pipe Line Co. in July was 29,-491.14 bbls., and deliveries were 97,736.56 bbls. Adding these figures to those of the Illinois Pipe Line Co. makes the runs and deliveries as follows:

1924—	Runs	Deliveries
July	759,646.84	553,355.10
August	720,457.72	519,335.79
September	714,875.36	535,762.80
October	741,767.42	542,863.77
November	650,147.63	521,459.31
December	640,919.23	595,942.28
1925—		
January	695,513.43	572,304.77
February	636,635.20	514,661.53
March	754,335.68	611,348.49
April	622,866.14	637,242.85
May	692,671.94	568,573.63
June	700,090.46	589,535.24
July	724,481.26	564,713.19

The Tidewater Pipe Co., Ltd., also delivered in July, 239,627.49 bbls. of Oklahoma oil. This total deliveries of all grades by the Tidewater were 506,124.51 bbls.

AVERAGE WEEKLY RECEIPTS OF CALIFORNIA OIL AT ATLANTIC AND GULF PORTS

Average bbls. per week	ATLANTIC PORTS						GULF COAST PORTS					
	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	New Orleans Baton Rouge	Port Arthur Sabine Pass	Tampa	Total	Total All Ports
April	22,162	68,600	269,031	119,700	133,000	612,492	.....	17,731	.....	.....	17,731	630,224
May	57,806	35,000	292.873	86.685	92,127	564,491	.....	.....	.....	.....	.....	564,491
June	60.669	17.731	136,031	117.600	44.569	376.600	.....	70.233	.....	2,569	72.807	449.407
July	36,127	79,891	265.321	93,042	89,873	569,254	.....	39,515	.....	.....	39,515	608,769

AVERAGE WEEKLY IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

Average bbls. per week—	ATLANTIC PORTS						GULF COAST PORTS					
	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	New Orleans Baton Rouge	Port Arthur Sabine Pass	Tampa	Total	Total All Ports
April	130,900	60,200	418,269	68,821	144,900	823,200	145,131	321,300	84,931	50,869	602,231	1,425,431
May	195,776	54,873	440.097	112,903	135,261	938,910	219,030	254,030	59,773	41,818	574,651	1,513,561
June	157,962	84,700	497.000	101,738	238,938	1,080,338	225.638	196,938	63.000	24.033	509,609	1,589,947
July	93,709	55,545	304.612	123,515	156,485	733,866	173,873	238,455	35,679	53,291	501,298	1,235,164

GROSS PRODUCTION IN THE UNITED STATES FOR 12 MONTHS

1924		California	Oklahoma	Texas	Kansas	Arkansas	Louisiana	Rocky Mountain	Eastern Fields	Total
August:	Month	19,113,993	16,525,356	11,808,876	2,717,398	4,359,241	1,702,525	3,749,375	3,286,000	63,261,764
	Daily average	616,548	533,076	380,931	87,658	140,621	54,920	120,948	106,000	2,040,702
September:	Month	18,308,233	16,299,030	11,089,492	2,638,900	4,029,535	1,795,575	3,330,007	3,150,000	60,840,772
	Daily average	610,274	543,301	369,650	87,963	134,318	59,853	111,000	101,936	2,021,359
October:	Month	18,696,569	16,189,898	10,942,005	2,768,455	3,983,696	1,774,707	3,058,288	3,395,000	60,808,588
	Daily average	603,115	522,255	353,000	89,305	128,506	57,249	98,654	109,516	1,961,567
November:	Month	17,767,024	15,956,620	10,731,264	2,597,460	3,461,050	1,965,921	2,783,110	2,941,000	58,207,459
	Daily average	592,234	531,854	357,709	86,582	115,035	65,531	92,937	98,033	1,940,248
December:	Month	18,795,126	16,031,185	11,264,915	2,537,443	3,380,511	1,870,876	2,302,888	3,000,850	59,183,794
1925	Daily average	606,294	517,135	363,384	81,853	109,049	60,351	74,287	96,402	1,909,155
January:	Month	18,743,288	15,462,800	13,790,195	2,520,858	3,278,484	1,774,072	2,627,676	3,065,993	61,263,366
	Daily average	604,622	498,800	444,845	81,318	105,758	57,228	84,760	98,903	1,976,333
February:	Month	16,869,828	13,905,780	11,361,896	2,466,660	2,886,296	1,547,461	2,666,335	2,905,000	54,609,216
	Daily average	602,494	496,635	405,782	88,095	103,082	55,265	95,226	103,750	1,950,333
March:	Month	18,626,009	14,403,716	13,047,068	2,824,534	3,564,473	1,807,517	2,784,235	3,282,000	60,289,552
	Daily average	600,839	464,636	420,886	91,114	114,983	58,307	89,201	105,871	1,944,502
April:	Month	17,959,653	14,055,450	13,683,520	2,971,110	7,560,240	1,695,780	2,744,691	3,157,000	62,827,444
	Daily average	598,655	468,515	422,784	99,037	252,008	56,526	91,490	107,150	2,026,692
May:	Month	18,520,328	14,486,579	13,165,005	3,493,266	11,813,996	1,887,729	2,799,542	3,167,300	69,833,745
	Daily average	607,107	467,309	424,678	112,686	381,097	60,572	90,308	102,171	2,246,250
June:	Month	19,288,135	12,832,970	12,582,740	3,175,440	9,200,372	1,900,506	2,754,498	3,389,000	66,124,661
	Daily average	642,938	431,099	419,458	105,848	306,679	63,350	91,816	109,000	2,133,053
July:	Month	20,411,049	14,263,565	13,390,917	3,686,675	7,835,819	1,898,178	3,129,199	3,348,000	66,963,402
	Daily average	658,021	460,115	396,804	118,935	252,768	61,231	100,942	108,000	2,160,110
	Total 12 months	223,398,245	181,411,949	144,858,893	34,398,199	65,353,713	21,620,802	34,684,824	38,187,143	743,913,768
	Daily average	612,050	497,156	396,874	94,242	180,421	56,495	95,027	104,621	2,035,120

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